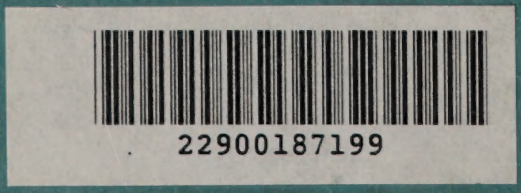
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The London Medical Record.

Article 1781.

WINDLE ON THE MORBID ANATOMY OF DIABETES MELLITUS.

Dr. B. C. A. Windle (*Dublin Medical Journal*, Sept. 1883) has compiled an account of the *post mortem* appearances in all the cases of diabetes mellitus he could find recorded.

He has tabulated the facts obtained under the headings of the principal organs, and the tables are printed below.—[It is to be regretted that the author did not append a bibliography to indicate the exact extent of his evidently laborious researches.—*Rep.*]

Brain. No. of Cases, 184.—Normal, 91 ; excavations around arteries, beginning usually in hæmorrhages, 11 ; enlarged perivascular sheaths of vessels (generally only slight), 8 ; congestion of capillaries and degeneration of nerve-cells in floor of fourth ventricle, 4 ; tumours in fourth ventricle, 4 ; hyperæmia, 4 ; anæmia, 3 ; atrophy, 3 ; cerebral hæmorrhage, 3 ; œdema cerebri, 3 ; puncta cruenta unusually numerous, 3 ; increase of subarachnoid fluid, 3 ; hyperæmia and fatty degeneration of floor of fourth ventricle, 2 ; extravasations on floor of fourth ventricle, 2 ; embolic softening, 2 ; softening, 2 ; hyaline thickening of coats of arteries, 2 ; disseminated sclerosis, 1 ; œdema of membranes, 1 ; softening and hyperæmia, 1 ; hypertrophy and anæmia, 1 ; tough, 1 ; tough and pale, 1 ; hard nodule in right middle lobe, with capillary extravasations, 1 ; suppuration at anterior inferior portion of right anterior lobe, 1 ; softening of cerebellum and left middle peduncle, 1 ; meningitis, 1 ; 'tumour' (situation not mentioned), 1 ; hæmorrhage over base, extending to medulla oblongata, 1 ; almost entire disappearance of grey matter at level of fourth ventricle, 1 ; softening of pons ; induration of medulla oblongata ; atrophy of olivary bodies, 1 ; softening and atrophy of medulla oblongata, with diminution of grey matter, 1 ; hydrocephalus, 1 ; tubercle, 1 ; sarcoma of right half of medulla oblongata, 1 ; induration and extravasations of blood in posterior part of right half of medulla oblongata, 1 ; ossific growth pressing on pons, with abscess in posterior cerebral lobes, 1 ; tumour on inferior surface of medulla oblongata, 1 ; point of softening at bottom of fourth ventricle, 1 ; vessels at base of brain diseased (? nature), 1 ; blood clot in medulla oblongata and pons, 1 ; clot over right hemisphere, 1 ; small cavity, with whey-like and fibrous contents between left thalamus opticus and corpus striatum, eight similar ones on opposite side, 1 ; gumma, 1 ; cysticercus, 1 ; meningitis acuta purulenta, 1 ; thrombosis of sinuses, 1 ; softening of pons and crura, 1 ; swelling of tip of calamus scriptorius, 1 ; colloid-like bodies in medulla oblongata and cerebellum, 1.

Spinal Cord. No. of Cases, 58.—Normal, 37 ; excavations around vessels, with sometimes dilatation of central canal, 11 ; hyaline thickening of coats of vessels, 2 ; congested, 1 ; soft in cervical region, 1 ; abscess in grey matter of cervical region, 1 ; 'posterior columns changed' (? nature), 1 ; 'cord diseased' (nature of disease not specified), 1 ; congestion of vessels and clot beside cord at third, fourth, and fifth dorsal nerves ; softening of cord there, and at third and fourth cervical nerve, 1 ; myxoma of dura mater, with changes in cord, including proliferation of epithelium in central canal, and sponginess of grey matter, 1 ; old disintegration of grey matter at seventh cervical vertebra, 1.

Ganglia of Sympathetic. No. of Cases, 17.—Normal, 8 ; increase in connective tissue ; thickening in capsules of cells ; diminution of cells, and of medullated fibres in ganglia, 5 ; hyaloid thickening of coats of vessels, 2 ; pinkness of some when compared with others, 1 ; small, 1.

Heart. No of Cases, 94.—Normal, 70 ; small, 9 ; hypertrophied, 4 ; fatty, 4 ; soft, 2 ; pericarditis, 2 ; small and pale, 1 ; valvular disease, 1 ; covered with gelatinous substance, 1.

Lungs. No. of Cases, 333.—Normal, 75 ; phthisis, 109 ; pneumonic phthisis, 27 ; congestion, 19 ; œdema, 18 ; cheesy or yellow scrofulous masses, 17 ; vomicæ, 12 ; pneumonia, 10 ; miliary tubercle, 8 ; grey hepatisation, 7 ; catarrhal pneumonia, 6 ; intra-alveolar extravasation of blood, 6 ; fluid in pleural cavity, 3 ; fat emboli, 3 ; cheesy bronchial glands, 3 ; sloughy cavities, 2 ; pleuritis, 2 ; red hepatisation, 1 ; œdema disintegrating, 1 ; gangrene, 1 ; hæmorrhagic infarcts, 1 ; hypostatic pneumonia, 1 ; empyema, 1.

Liver. No. of Cases, 220.—Normal, 84 ; enlarged, 38 ; enlarged and congested, 19 ; congested, 12 ; fatty, 12 ; atrophy of cells, 11 ; small, 9 ; congested and hard, 4 ; hypertrophic cirrhosis, 3 ; homogeneous, 3 ; congested and fatty, 2 ; dark and homogeneous, 2 ; dilated capillaries, 2 ; enlarged and containing abscesses, 2 ; tubercle, 2 ; malignant disease, 2 ; congested, with fatty changes and extravasations, 1 ; congested, with fatty changes and coagulation in veins, 1 ; congested, with coagulation in veins and peculiar capillary dilatation, 1 ; syphilomata, 1 ; large and calculous, 1 ; cirrhotic, 1 ; containing a large abscess, 1 ; pale, 1 ; hypertrophy of right lobe, 1 ; small and anæmic, 1 ; dark, small well-marked lobules, 1 ; hypertrophied, with colloid patches, 1 ; cloudy swelling of epithelium, 1.

Spleen. No. of Cases, 95.—Normal, 61 ; soft, 7 ; enlarged, 6 ; small, 5 ; hyaline degeneration of the arteries, 5 ; congested, 4 ; large and homogeneous, 2 ; small and hard, 1 ; small and anæmic, 1 ; congested, smooth, and firm, 1 ; tubercle, 1 ; lardaceous, 1.

Kidneys. No. of Cases, 271.—Normal, 115 ; fatty and more or less enlarged, 35 ; large and soft, 19 ; congested, 18 ; enlarged, 14 ; cirrhotic, 10 ; large and congested, 9 ; large and mottled, 8 ; coarse, 7 ; enlarged, degenerated, and containing casts of various kinds, 6 ; tubercle, 5 ; carcinoma, 3 ; containing cheesy masses, 2 ; large and coarse, 2 ; anæmic, 2 ; suppurative nephritis, 2 ; cortex pale, 2 ; cloudy swelling of epithelium, 2 ; containing ecchymoses, 1 ; calculous pyelitis, 1 ; enlarged, pale, with purulent foci, 1 ; enlarged, firm, anæmic, with dilated pelves, 1 ; diminished cortex, 1 ; scrofulous nephritis, 1 ; soft and hyperæmic, 1 ; amyloid, 1 ; softening of cortex, 1.

Pancreas. No. of Cases, 139.—Normal, 65 ; atrophied, 38 ; atrophied with fatty degeneration of cells, 11 ; changed to fibrous band, 5 ; atrophy from calculi in duct, 3 ; malignant disease, 3 ; cloudy swelling of epithelium, 2 ; calculi in duct, without atrophy, 1 ; fatty, 1 ; large and fatty, 1 ; soft, 1 ; congested, 1 ; small well-marked lobules, 1 ; trans-

formed to cystic pouch, 1; fatty, with dilated ducts, 1; dark coffee-brown, 1; small hæmorrhages, 1; cretaceous, 1; 'changed' (alteration not specified), 1.

Stomach. No. of Cases, 77.—Normal, 52; hæmorrhages, 5; chronic catarrh, 4; papillation and ulceration of mucous membrane, 4; vascular, 3; softening of mucous membrane, 3; thickening, 2; acute catarrh, 2; softening, 1; contained dark blood, 1.

Intestines. No. of Cases, 69.—Normal, 51; hæmorrhages, 6; tubercular ulceration, 2; peritonitis, 2; dysenteric ulceration, 2; opaque, 1; greasy, 1; ulcerated (? enteric fever), 1; false membrane, 1; catarrh, 1; thickening of mucous membrane, 1.

Bladder. No. of Cases, 40.—Normal, 20; hypertrophied, 13; dilated without hypertrophy, 3; much epithelium detached, 2; ecchymoses, 1; cystitis, 1.

ROBERT SAUNDBY, M.D.

ARTICLE 1782.

KIRN ON CHRONIC CHLORAL POISONING.

PROFESSOR KIRN devotes a long article to this subject in the *Berl. Klin. Wochensch.*, No. 47. After saying that *acute* intoxications are common enough after various vegetable drugs, whose good effect is indeed owing to this acute action (*e.g.* the alkaloids of opium, haschisch, atropia, nicotine, strychnine, curara, &c.); he goes on to say that very few drugs cause *chronic* psychic disturbances. For instance, tobacco may cause weakness of memory, coarseness of voice, and a condition of mental anxiety. Ergotin may cause various psychic disturbances, chief among which are stupor and acute dementia. Morphia has attained a sad celebrity since the introduction of hypodermic injections, and may cause mental disturbances shown by a muttering voice, weakness of memory, moral depravity with weakness of will, bodily and mental discomfort going on to deep depression: less often, anxiety and hallucinations. Occasional psychopathic phenomena of abstinence from morphia are profound melancholy with extreme anxiety, sleeplessness, and sensory delusions.

Alcohol is better known still. The most various affective disturbances may arise from its chronic use, besides debility. Chloroform is almost unknown in its chronic effects. The acute intoxication caused by chloral-hydrate is well known, and has given perfect satisfaction. It directly influences the higher nerve-centres, and may even cause paresis of the heart and respiration. It has been shown experimentally and clinically that it paralyses the vaso-motor nerves and centres, causing vascular relaxation generally. Numerous deaths from large doses of chloral are recorded—the patients showing cardiac and vascular relaxation, and a powerlessness, with lowering of the temperature, from which they never awoke. In non-fatal cases, the patients seemed drunk, rolling about, shouting, &c.

Chronic chloral poisoning is almost as common, and its phenomena fall under several heads; 1. Digestive disturbances, caused by its direct action upon the mucous membrane of the stomach; 2. Skin affections; eruptions, such as erythema, urticaria, purpura, petechiæ—which usually disappear on disuse of the drug; 3. Phenomena of the vaso-motor system, such as reddening of the skin of the head and neck—with conjunctival and retinal hyperæmia; such symptoms are due to the action of small quantities of spirituous liquids taken with the chloral, and are in connection with the central innervation of the vessels; 4. Lowering of the general nutrition, with limb-pains; 5. Slight mental disturbances.

Hitherto, however, no case has been published in which a definite mental affection was caused by chloral, and the following case is reported to supply this gap.

S. G., aged 35, a married tradesman, of neurotic family history, was always of an excitable temperament; his intelligence was normal. Since 1877, he had suffered from typical asthma, recurring every eight or ten days; once there was an intermission of eight months. All medicines he took proved useless, except atropine, given subcutaneously. Three years ago his physician prescribed him chloral-hydrate with morphia; chloral-hydrate 6 grammes (=92 grains), morphia 0·05 grammes (=$\frac{3}{4}$ grain). He took half this at first about once a week, but gradually he increased the dose of chloral to 8 grammes (124 grains), with morphia, 6 centigrammes (about $\frac{9}{10}$ grain), which large dose he took almost daily. He lived now in a chronic stupor, had an irregular appetite, diarhœa, emaciation, tenesmus of the bladder, drawing pains in the limbs and back, and finally loss of natural sleep, moral weakness, want of will, and mental irritability. Isolation becoming an urgent indication, since he purchased the drug secretly, he was admitted into hospital July 4, and suddenly deprived of the chloral, morphia alone being injected in small quantities. He was at first unruly, but quieted down after a few days. But then hallucination set in, which affected the sense of hearing exclusively. He heard voices continually during the day only, threatening him with all sorts of dreadful deaths. His weight now became reduced from 56 to 36 kilogrammes (123 to 79 lbs.); he was very thin; the pulse was small. He had frequent diarrhœa, tenesmus of the bladder, and drawing pains in the limbs.

After a month he began to improve, though he suffered from headache and noises in the ears. After two months the asthma returned; it had been absent since admission. Towards the middle of September he gradually became convalescent. The asthma resumed its old frequency.

The author remarks that here an insanity with illusions set in on the deprivation of the chloral, and of a special kind. The affection bears the greatest analogy to that sometimes caused by the sudden abstention from alcohol in old drinkers; but the affection was not due simply to abstention from chloral, but partly to chronic intoxication, partly to the shock from abstention.

The *form of the disease* allies it still more closely to alcohol effects, especially to a chronic form of the latter affecting the hearing, and described by Nasse as 'the persecution-delusion of drunkards affected mentally.'

Lastly, etiologically considered, alcohol and chloral are nearly related chemically, and are both called anæsthetics in pharmacology.

Pathologically, there was a persistent vaso-motor paresis of the central nervous system. Then ensued weakness of circulation in the brain, venous stasis, arterial anæmia, and nutritive disturbances, with gradual tissue-alterations.

The chloral-psychoses are apt to relapse, like those from morphia and alcohol. This is the great danger. Such cases as the above warn us that with such drugs as chloral the remedy may prove worse than the disease. [In the production of the above mental and bodily disturbances, Prof. Kirn does not seem to take into consideration the morphia the patient was taking.—*Rep.*]

E. J. EDWARDES, M.D.

ARTICLE 1783.

WORTMANN ON TUBERCULAR MENINGITIS.

DR. WORTMANN contributes (*Jahrbuch für Kinderheilkunde*, Band xx., Heft 3), a long and valuable analysis of fifty-six consecutive cases of this disease; thirty of the patients were girls, and the ages were from ten months to eleven years, about three-fourths of the whole number being from two to five years old. All but six were poorly nourished on admission and twenty-five had enlarged glands. A family taint could be traced in twelve. The first symptom of the disease proper appeared to be vomiting, which took place usually once or twice a day or oftener; but very seldom occurred at night. It nearly always ceased when the pulse became slow; though, in one case, it continued throughout and could not be subdued. Contrary to the experience of many, in five cases the vomiting returned after a cessation of from two to four days. In four patients vomiting was absent. Constipation was present throughout in forty-two cases; in ten it gave place two or three days before death to involuntary motions; while in the remaining four, diarrhœa persisted throughout the complaint. Headache, with one exception, was a constant symptom. The abdomen was markedly retracted in thirty-four cases, and moderately so in the rest; but the author's experience did not support Vogel's view, for in only three was there any apparent tonic spasm of the abdominal muscles. Irregular respiration was never absent; but, as the end approached, it usually gave place to severe dyspnœa. The pulse appears to have followed the recognised course. It became rapid a few hours before death in every case. Fever was present even in the prodromal stage. In the first stage proper, it was never over 104°, and showed morning remissions of nearly two degrees. When the pulse became slow the temperature began to fall, but was some days before it reached the normal point. In sixteen, however, it rose instead of falling; and six of this number were without complication. In the third stage the temperature varied very much in different cases; but, as a rule, it either rose or remained the same. Occasionally it fell, and in two cases it sank to 89·6. Shortly before death it suddenly rose, in uncomplicated cases, to a great height as, *e.g.* from 99° to 106°. After death, the temperature rose moderately where it had been previously high for some time; but, where the rise had been sudden, it rose a great deal; in other cases, it gradually sank after death. Retraction of the head was present in all but one case, and commenced when the pulse became irregular; in one the head was drawn towards the left as well as backward, and here a large tubercle was afterwards found on the left side of the cerebellum. Hyperæsthesia was present in all but one of those cases in which the spinal meninges were involved. Herpes zoster appeared in one of these cases. The urine was carefully examined, but showed no constant alteration; the urea was sometimes increased, sometimes diminished. Photophobia was a frequent symptom. The pupils in the first stage were chiefly remarkable for their sudden variations without any corresponding changes in the amount of light. When the pulse became slow and irregular, the pupils dilated and were sluggish. A transient difference in the size of the two pupils was frequently observed, but appeared to have no connection with the position of the child. On the pulse becoming rapid again, the reaction to light was generally lost, and the pupils were either contracted or of normal size. The ophthalmoscope was used in twenty-seven cases. Of these twelve presented a normal fundus, four showed tubercles on the choroid, ten venous hyperæmia of retina, and amongst these were four with optic neuritis. One case showed hæmorrhages and cloudy papillæ (on autopsy large tubercles were found in the cerebellum, but no nephritis). Nystagmus was observed five times, ptosis six times. General convulsions set in with commencing coma. Partial convulsions, which affected chiefly the face, appeared earlier; the pupils became dilated during the paroxysms. Paralysis, which, however, was never complete, affected in different cases the eyes, face, and extremities. In the last it was preceded by clonic spasm of the part affected. The *tache cérébrale* was present, in a varying degree, in the majority; but flushes, alternating with pallor, of the face, were remarked in all. The skin was dry until near the end, when sweating broke out. The duration of the disease was from six to forty-five days, with an average of eighteen.

The necropsies showed general miliary tuberculosis in forty-five out of the fifty-six cases. Cheesy deposits, chiefly in the bronchial and cervical glands, were found in all. The spleen was tubercular, either in substance or on the capsule, in every case. It was enlarged in twenty-eight patients. The mesenteric glands were always enlarged, and in fifteen cases they were cheesy. The exudation at the base of the brain was of a more or less gelatino-purulent character; it frequently extended forward so as to involve the olfactory lobes. The convexity was involved in fourteen cases, but there was no case in which the convexity alone was affected. The ventricles were dilated. The choroid plexus showed tubercles in nineteen cases, and contained a moderate quantity of blood in all. The spinal cord was examined in the last twenty-seven cases. In four of these, no change was found. In the remainder the spinal fluid was increased, and often turbid. The pia mater, especially in its posterior aspect, was thickened, yellowish, and tuberculous, in direct proportion to the duration of the disease. In four the dura mater was thickened, and in two cases the spinal cord was the seat of a large solitary tubercle.

RALPH W. LEFTWICH, M.D.

ARTICLE 1784.

TROIANOFF ON THE EFFECTS OF EXTENSIVE BURNS ON THE ANIMAL SYSTEM.

DR. ALEXIS TROIANOFF'S inaugural work (*St. Petersburg Dissertation*, 1882), undertaken to determine the connection between the morbid changes, symptoms, and cause of rapid death in cases of extensive burns, is one of the most valuable, able,

and conscientious contributions to the study of the question, and undoubtedly will occupy a fully deserved prominent place in Russian medical literature. The author conducted his numerous experiments (on puppies, adult dogs, rats, and rabbits) at Professor V. V. Pashutin's laboratory, and arrived at conclusions which are summed up by him as follows.

1. In the majority (58 per cent.) of the cases observed, the internal (rectal) temperature of the body, immediately after inflicting an extensive and intensive burn of the skin, rose at from 0°·2 to 1°·5 C. (0°·36 to 2°·7 F.), and remained at high figures; then, after an interval of a very varying duration, depending on the extent and degree of burning, but generally a few hours before the animal's death, there followed either a slow or a rapid fall of the temperature. Death occurred when the temperature of the body reached 33° C. (91°·4 F.), but when artificially heated or wrapped in the thick layers of wadding, the burned animal died at 36°·5 C. (97°·7 F.), or at even a higher temperature of the body.

2. In some exceptional cases (6 per cent.) occurring in the small-sized animals (as puppies and rats), and in instances of very intense and prolonged scalding (three to five minutes), the temperature in the rectum, immediately after a burn, rose at from 2°·5 to 4°·9 C. (4°·5 to 8°·8 F.); then it rapidly fell, death soon following.

3. In a certain proportion of the cases (16 per cent.), the rectal temperature, immediately after an extensive burn, fell from 0°·2 to 2°·3 C. (0°·36 to 4°·14 F.), but then again rose, and remained at a high figure, the subsequent course being the same as in the cases with the primary elevation of temperature. This primary transitory elevation of temperature undoubtedly depended upon a prolonged and deep narcotisation of the animals. (The burns were inflicted under chloroform.)

4. In the remaining 20 per cent. of the cases, the rectal temperature immediately after burning was found decreased from 0°·3 to 1°·8 C. (0° ·54 to 3°·25 F.) in adult dogs, and at from 1°·8 to 6°·2 C. (3°·25 to 11°·16 F.) in small sized animals; then it continued to progressively fall until death; in some instances, however, it presented slight oscillations, in no case reaching the normal standard.

5. Generally, the more extensive and prolonged the action of heat was, and the smaller the animal, the more rapidly and considerably the temperature decreased.

6. The fall of temperature after a preceding elevation, as well as its considerable and rapid decrease immediately after the burn, always pointed to an early fatal issue.

7. No artificial warming of the burned animals could delay the invariably following death, the latter occurring even at a high bodily temperature.

8. The heart's action and the pulse immediately after the burn were always increased in frequency, and at first presented no other deviation from the normal conditions; but after an interval, the duration of which was dependent on the extent and degree of the burn and on the constitutional peculiarities of the animal experimented upon, the pulse grew weak, small, thread-like, irregular, and finally imperceptible. The exposed arteries appeared pale and collapsed. The beats of the heart gradually became weak; in the further course of the case, the heart's action presented progressive retardation.

9. In cases of very extensive and intense burns, rapidly running their course, the respiration was either highly accelerated and shallow (high degree of dyspnœa), or slow, deep, and laboured, sometimes irregular (Cheyne-Stokes phenomenon); in the cases with a less rapid course, the respiration was retarded and superficial.

10. Languor, apathy, and drowsiness developed themselves very rapidly after burning. The burned animals became entirely listless and apathetic to all surroundings; they showed no reaction in response to pain-stimuli; they bore various operations—puncture, incision—without the slightest manifestation of pain. Then there followed a soporous state, cyanosis, prostration; and, finally, death, accompanied with convulsive movements of the limbs.

11. The occurrence of convulsions in the extremities usually indicated the early occurrence of death.

12. One of the most characteristic and absolutely commonest morbid changes in the viscera was affection of the kidneys, consisting in a parenchymatous process and accumulation of effusion in Bowman's capsules (glomerulo-nephritis).

13. A rather common phenomenon was the affection of the gastro-intestinal mucous membrane, consisting in a diffuse or patched hyperæmia, capillary extravasations, and parenchymatous process in the glandular layer. The author never met any ulcerative changes in the duodenum.

14. Extensive burns of the skin very markedly suppress the oxidation process in the animal system, as is shown by (*a*) decreased formation of animal heat, and (*b*) decreased daily excretion of urea.

15. Already within six hours after an extensive burn, the amount of the heat formed decreases 50 per cent. below the standard.

16. The cooling of the body after extensive burns depends upon the decrease in the production of heat, but not on the increased loss of heat by the surface of the body, as Falk supposed.

17. The burned animals gave out (to the surrounding medium) considerably smaller amounts of heat than the healthy ones.

18. The quantity of urea excreted progressively decreases up to the moment of death.

19. Dr. Avdakoff's assertions (*St. Petersburg Inaugural Dissertation*, 1876), according to which the blood, in cases of extensive burns, acquires some specific poisonous properties (in consequence of disturbance of the perspiratory functions of the skin), and, on its being taken out of the vessels of a dying burned animal and transfused into a healthy one, produces a train of symptoms identical with those of the burn, ending in death, are not supported by experiments.

20. The same may be said in regard to Dr. Catiano's hypothesis (Virchow's *Archiv*, Vol. xxxvii., 1882) declaring that rapid death after extensive burns of the skin is dependent upon the poisoning of the system by prussic acid developed in the skin.

21. The destruction of red blood-corpuscles never reaches any great extent, even after very extensive scalding of the skin; the vast majority of red blood-corpuscles retain their normal morphological features and colour.

22. The morphological changes of red blood-corpuscles are characteristic, and consist in disintegration or death.

23. The presence of altered red blood-corpuscles in the circulating blood is not an absolutely necessary feature of every case of extensive burn.

24. The blood of burned animals does not lose its respiratory faculties.

25. Dr. Lesser's assertion (the London Medical Record, 1881, July, p. 266) that red blood-corpuscles in cases of extensive burns undergo (beside a visible disintegration), some impalpable alterations, and that, losing their hæmoglobin, they become unfit for their functional activity, has no firm grounds.

26. Those red blood-corpuscles which preserve their normal morphological properties, contain as much hæmoglobin as before burning.

27. An immediate transfusion of the blood from intensely burned animals into the vessels of highly anæmiated animals does not produce any disturbances pointing to a weakened functional activity of the red corpuscles, and, as a rule, does not lead to any severe symptoms.

28. Morphological changes of red corpuscles occur when the blood is heated up to 52° C. (125°·6 F.).

29. Defibrinated blood, heated to 52° to 55° C., on being transfused into the vessels of an anæmiated or non-anæmiated animal, acts fatally only when the quantity of blood transfused is greater than 50 per cent. of the normal amount of the receiver's blood.

30. Transfusion of defibrinated but not strained blood, further heated up to 57° to 62° C., kills in smaller quantities.

31. Blood overheated up to 62° C. (143°·6 F.) and carefully strained, on being transfused into an anæmiated animal in a quantity equal to 32 per cent. of the normal amount of the receiver's blood, does not cause any severe disturbances, except temporary hæmoglobinuria.

32. Transfusion of the overheated blood in a quantity greater than 50 per cent. of the amount of the receiver's blood, invariably leads to death.

33. Death after transfusion of the unstrained or overheated blood is dependent upon engorgement of capillaries and uriniferous tubuli by the products of the deteriorated red corpuscles.

34. Immediate transfusion of the blood taken from burned animals during the earliest period of the symptoms, does not produce any severe disturbances, even when used in a quantity equal to 58 per cent. of the primary amount of the blood of the anæmiated receiver.

35. Blood from intensely burned animals, and blood artificially overheated, cannot be regarded as 'equivalent' either in their morphological peculiarities, or in their influence upon the healthy animal system; the artificially overheated blood being endowed with more noxious properties.

36. Dr. Lesser's statement, that the phenomena of shock in the burned are dependent upon the action of the altered blood on the vaso-motor centres, cannot be supported by experimental evidence.

37. When the blood from burned animals, or artificially overheated blood, is transfused into a highly anæmiated animal, the blood-pressure does not decrease, but remains at the normal height even twenty-four hours after the transfusion; and even in those cases where the quantity of the transfused blood reaches 100 per cent. of the normal amount of the receiver's blood.

38. The changes observed in the kidneys after transfusion of artificially overheated blood have nothing in common with the renal alterations in burned animals. The inflammatory phenomena in the kidneys after transfusion, as seen in the cases rapidly ending in death, are very slight, the process essentially consisting in contamination of the urinary tubules with the products of the overheated blood, which are excreted through the kidneys.

39. The inspissation of the blood after extensive burns of the skin does not reach any considerable degree.

40. The thickening of the blood is most pronounced during the first hours after a burn, when the loss of water, as a rule, does not surpass 2 per cent. So slight a loss of water cannot possibly be an exclusive cause of the rapid death of the burned animal.

41. Transfusion of a warm solution of chloride of sodium (0·7 per cent.) into the vessels of burned animals (in other words, the removal of the inspissation of the blood) does not save from the fatal issue.

42. Similarly, transfusion of normal defibrinated blood seems to bring no visible improvement, and does not delay the invariable death.

43. In none of the author's experiments was there observed a rapid and considerable fall of the blood-pressure, as described by Sonnenburg and Lesser.

44. The blood-pressure remained high, even when there already existed a decrease of metamorphosis and temperature, apathy, muscular weakness, &c.

45. Hence, it is impossible to ascribe the disturbances observed in the burned, chiefly to a fall of the blood-pressure.

46. The blood-pressure highly rises at the moment of inflicting a burn; but in the later stages of the course of an extensive burn, the blood-pressure in an animal experimented upon, may very rapidly fall in consequence of various mechanical influences, as spreading the animal on the experimentation-table, tying, &c. V. Idelson, M.D.

Article 1785.

STIMSON ON COMPOUND ARTICULAR FRACTURE.

In a paper read before the New York Surgical Society, and reported in the *Annals of Anatomy and Surgery*, Nov. 1883, Dr. Lewis Stimson reported three cases of fracture, with the object of directing attention not to those extensive injuries, in which the question lies between excision and amputation, but to those lesser ones, in which the injury to the bone and soft parts being comparatively slight, the main feature is the implication of the joint, and the therapeutical problem is how best to avoid dangerous suppuration within it. The first case is one of simple dislocation backward at the right elbow of both bones of the forearm, in a man aged 28. The dislocation having been easily reduced after the administration of ether, a movable hard body, about half an inch in length, was found lying under the skin on the outer side of the joint between the head of the radius and the olecranon, which was judged to be the inner portion of the head of the radius broken off when the bone had been forced backward past the condyle. Believing that this fragment, if left in place, or even it could perfectly be restored to its proper place, would interfere very seriously with the subsequent mobility of the joint, Dr. Stimson at once made an incision and removed it. The joint was washed out with a 1 to 40 solution of carbolic acid, a short drainage-tube was inserted, and a gauze dressing applied. The patient did well until the ninth day, when the temperature rose to 103°, and the joint became painful. Two days later, there was

a discharge of pus from the wound. During the next four weeks, there was suppuration around the joint and burrowing of pus. This case ended satisfactorily. The joint remained very stiff for some time, but ultimately the man resumed work as a driver; and, when he was seen again twelve months after the date of his accident, the arm was found to be strong and serviceable. Flexion and extension at the elbow were almost complete, but rotation of the arm was entirely lost. The subject of the second case, a man 22 years old, was treated for compound fracture of the left patella. The bone was broken transversely a little below its centre, without comminution, and the fracture communicated freely with a clean-cut transverse wound one inch and a quarter in length, lying directly over it. On the second day Dr. Stimson enlarged the wound, washed out the knee-joint with a 1 to 20 solution of carbolic acid, passed a drainage tube into the joint on each side through an opening made at about the centre of each lateral aspect, brought the fragments of bone together with a silver wire suture, the loop of which included all the soft parts except the skin in front, closed the wound with sutures, and applied a gauze dressing. Much suppuration followed in this case; and the fragments of the patella, it is stated, became united by a fibrous band about one-fourth of an inch long. The movements of the joint were much restricted, but at the time of his discharge, about nine weeks from the date of injury, the patient was able to walk without a crutch, and could flex the knee to an extent of ten degrees without feeling pain. In the third case the patient, a man 47 years old, came under the care of Dr. Stimson with a compound fracture near the left ankle. The left fibula was broken at a point about three inches above the top of its malleolus; the inner malleolus was broken off at its base, and this fracture communicated with a transverse wound of the skin directly over it, through which blood flowed freely. A small piece of bone which lay in the wound was removed. The surface of the limb at the seat of injury was washed with the carbolic acid solution, but the wound was not injected. Gauze dressings were applied with lateral splints. On the third day a plaster-of-Paris splint was applied. The patient, who presented at first some symptoms of alcoholism, ultimately did well; and, after an interval of two months and a half, the joint was freely movable and painless.

In his comments on these cases Dr. Stimson concludes with the following statement. 'Of these three cases, the one that did best was the one that was least interfered with (it was also that in which the injury was least, but the difference in this respect was not great enough, I think, to account for the difference in the results); and I find in this fact, and in the fundamental success obtained in all, ground for the belief that confidence in modern methods of treating wounds should incline the surgeon rather towards absolute conservatism than towards operative interference; that in cleanliness, drainage, and rest, we have agents efficient in themselves to avert inflammation of the joint, or, failing that, to keep the inflammation within such limits that the risks of an operation, if it should become necessary, are not materially increased; that the safeguards now possessed against the occurrence of formidable complications of wounds should give confidence to expect the comfortable healing of wounds accidentally inflicted, rather than stimulate to the voluntary creation of new ones; and that the broad rules of treatment such as those under consideration should be to avoid excision, except when it is clearly indicated by the extent of the injury, the difficulty of establishing drainage, or by an economical reason arising from the function of the joint involved and the social condition of the patient that may make mobility, even if combined with some insecurity, preferable to ankylosis.' W. JOHNSON SMITH.

ARTICLE 1786.

HAHN ON THE TREATMENT OF SYPHILITIC ULCERATION OF THE RECTUM BY COLOTOMY.

DR. EUGEN HAHN, of Berlin, in a contribution to the *Archiv für Klinische Chirurgie*, Band xxix., Heft 2, after some remarks on the differences in opinion as to the origin and the nature of the so-called syphilitic ulceration of the rectum, observed almost exclusively in women, states that this affection, when advanced and extensive, is very rebellious to both local and general treatment. In most cases, notwithstanding the repeated use of antiseptic and astringent injections, division of strictures, and the application of the sharp spoon and the actual cautery, together with the internal administration of iodide of potassium and mercurial preparations, the affection persists, and, though slower in progress, is not less surely fatal than carcinoma of the rectum. Death results in some cases from the exhaustive effects of profuse discharge and amyloid degeneration of several organs; in others from perforative peritonitis, and in others again from pyæmia and septicæmia.

The author advocates the performance of colotomy in desperate cases of rectal ulceration where all other means have been tried without success, and where a fatal result seems inevitable. Mention is made of eight such cases in which he had performed the operation. The subjects of two of these cases had recovered and were living when Dr. Hahn read this paper at the Congress of German Surgeons in April of this year, and one patient was then still under treatment. Three patients had died from intercurrent affections, after intervals of from eight to thirty months. Two patients died soon after the operation, one from inanition, the operation having been too long delayed, the other from peritonitis. In each of these cases the operation was performed in the left groin under strict antiseptic precautions, the attached portion of large intestine having been left unopened until the sixth day. Anterior colotomy is considered by the author to be less dangerous than the posterior or lumbar operation, and the following reasons are given for his selection of the former operation in the above-mentioned cases, in all of which the ulceration had been confined to the rectum. In the first place, after anterior colotomy, the patient is enabled to apply cleansing lotions to the ulcerated surfaces and to wash out the rectum. Secondly, this operation, it is thought, may be performed with more directness and precision than lumbar colotomy. Thirdly, and this seems to be the only important point, the wound can be maintained absolutely aseptic until the second stage of the operation.

In cases of exhausting and obstructive disease of the descending colon, as, for example, some new

growth which cannot be extirpated, or, what however very rarely occurs, extension of rectal ulceration to the splenic flexure of the colon, Dr. Hahn suggests colotomy in the middle line in front. In cases where it has been necessary to open the cæcum or lower part of the ileum, the patient, it is stated, usually dies from inanition in the course of a few weeks, notwithstanding the utmost care and judgment in supplying suitable nutriment. From the results of his experiments on dead bodies, Dr. Hahn concludes that there is no other part of the colon that can be reached so readily and so surely as its transverse portion in the middle line. He has performed *post mortem* operations in this region on twelve subjects of both sexes, and different ages, and has found that, except under rare conditions —extreme dilatation of the stomach being one—the transverse colon may be exposed in the middle line just above the navel, and in a line drawn directly across the front of the abdomen from the eleventh rib on one side to that on the other. The transverse colon, however, though it can be thus readily exposed, cannot be so readily brought to the surface and fixed to the margins of the external wound. The presence of the great omentum in this region, and the necessity of dividing it in order to reach the large intestine, demand special precautions for the avoidance of hæmorrhage. These difficulties in the performance of median colotomy during life would be found still greater in fat subjects.

W. JOHNSON SMITH.

ARTICLE 1787.

ALASSIO—A NEW WINTER RESIDENCE.

A NEW winter residence on the Riviera ought to interest the profession in England, especially now, when so many of their patients come hither, preferring our bright sun and balmy air to English mists and north-east winds. Alassio is the youngest of these health-resorts, and apparently quite as much favoured in climate as its rivals—San Remo, Bordighera, and Mentone. Last year lemons escaped, while much damage was done in the other towns by a few days of cold. All necessaries of life are easily procurable, and the tariff of prices is lower than in the other resorts. There is also good water. At present most of the hotels and villas are near the sea; but a new, well-appointed, and comfortable establishment—the Hôtel Suisse—has been opened recently near the railway station. There is much need of houses more inland, but no doubt these will in time be built. There is no lack of eligible sites for them, especially along the new Moglio road. There is a very tastefully designed English church, and an excellent clergyman, who is universally beloved; moreover, the peace of the community is not disturbed by religious differences. During the last five years there have been only two deaths among the English colony—one from apoplexy, the other from old disease of the heart and kidneys. Both sufferers were advanced in years. So far, every visitor seems to have received benefit from the climate; and this has been shown in several cases of phthisis, asthma, and bronchitis, and one or two of renal disease. The writer prefers Alassio to any other place; and he has been obliged to reside in the Riviera for many years on account of chronic bronchitis, and is well acquainted with all the health-resorts between this and Marseilles. A semicircle of hills keeps off cold winds, and fills our country with picturesque views. The air, especially on the hills, is most enjoyable, bracing without being irritating to the throat and lungs. The remark is often made—'What a hungry place this is!'

EDWARD DICKINSON.

ARTICLE 1788.

WEINLECHNER ON A CASE OF PAPILLOMA OF THE OVARY AND BROAD LIGAMENT: EXTENSIVE ADHESIONS TO THE UTERUS AND PELVIS: REMOVAL OF OVARY AND UTERUS.

A MARRIED woman, aged 29, came under the care of Dr. Weinlechner on January 26, 1879. For nearly two years her abdomen had been swelling. The catamenia were regular. The swelling was far more prominent on the right side, extending to the hypochondrium, and fluctuation was well marked. The cervix uteri was displaced to the left, and lay high up in the pelvis; the tumour projected downwards into the pelvic cavity anteriorly, posteriorly, and to the right. The circumference of the abdomen at the level of the umbilicus was 35½ inches. Tapping was immediately performed, and 9½ pints of a greenish, viscid fluid were drawn off. On March 31, the abdomen having again increased in size, the operation was performed 'with the strictest observation of Listerian precautions.' On opening the abdominal cavity, the shiny surface of the cyst was exposed; the uterus lay on its front wall, to which that organ was intimately connected. The right Fallopian tube was stretched over the surface of the cyst, which was not adherent to any structure above the level of the pelvis. After the cyst had been emptied, it was drawn out of the abdominal wound, and then found to be strongly adherent, on the right side, to Douglas's pouch. It was also discovered that the connection of the cyst to the uterus was so intimate that amputation of the uterus above the cervix was necessary; an *écraseur* was therefore applied around the lower part of the uterus and the base of the cyst. The left ovary was as large as a chestnut, and adherent to the pelvis; it could not be removed. Cyst and uterus were then cut away; hæmorrhage followed, and a second *écraseur* was applied to the stump; the chain was fixed there, and left over the lower angle of the abdominal wound, which was then sewn up, and a drainage-tube was fixed on each side of the uterine stump. The operation lasted an hour. On examining the parts removed, it was found that the greater portion of the uterus had been cut away obliquely, so as to include the whole of the right side of the body and the left upper angle, with the beginning of the left tube. The main cavity of the cyst contained a gallon of greenish glairy fluid, and was lined with exuberant papillary growths and secondary cysts filled with similar growths, which also infested the dilated aperture of the Fallopian tube. The patient died on the twentieth day, after a long course of different unfavourable symptoms; the tubes had been removed on the fourth day, and the chain of the *écraseur* on the eighteenth. At the necropsy, all the symptoms of acute purulent peritonitis were observed. The portion of the base of the cyst-wall above which the chain of the *écraseur* had been passed, lay open,

and papillomatous masses sprang from it. The distal portion of the left tube lay wide open over its ovary which adhered to the pelvic wall. The ureters had not been tied or injured; the right lay pressed against the pelvic brim by the base of the cyst. The right kidney showed all the appearances of the contracting stage of interstitial nephritis; the left was in the earlier swollen condition indicative of that disease. [This was clearly a very difficult case for operation. A careful examination of the condition of the urine before operation is not recorded; in fact, not a word is said about the urine in Dr. Weinlechner's report. In necropsies of patients who have died after ovariotomy, the kidneys are, as a rule, found to be diseased. (See the reporter's 'Further Remarks on Complete Intraperitoneal Ligature of the Pedicle in Ovariotomy,' *St. Barthol. Hosp. Rep.*, Vol. xiv., 1878, p. 128). An hour is too short a time for so complicated an operation, where it is very necessary to secure every bleeding point within the abdominal cavity, and to be certain that any fluid that may have escaped from the cyst has been cleared away by sponges. The cut end of the distal part of the left Fallopian tube seems to have slipped from the chain; its exposed cavity was a source of infection. A Koeberlé's clamp answers better than the chain of an *écraseur*, for obvious reasons. The tumour itself is a very good example of the papillomatous type of cyst, originating, in this case, from certain structures common to the hilum of the ovary and the broad ligament. See Coblenz on The 'Embryological Origin of Ovarian, Uterine, and Vaginal Cysts,' LONDON MEDICAL RECORD Vol. x., 1882, p. 81.—*Rep.*] ALBAN DORAN.

ARTICLE 1789.

PRATI ON RESECTION OF TWENTY-ONE CENTIMETRES (8¼ INCHES) OF INTESTINE.

A WOMAN, aged 61, with an old inguinal hernia of the left side, was admitted on Feb. 9. Symptoms of strangulation had existed for five days. The operation was performed under salicylic spray. On opening the sac, the gut was seen to be gangrenous, and adherent to the neck of the sac. On gently tearing down these adhesions and pulling out the gut, stercoraceous matter was found to escape from an ulceration at the site of stricture. The loop of intestine involved measured twelve centimètres. Above and below, for some distance, the gut was contracted and fusiform. Owing to this contraction, it having been decided to excise the portion of bowel, it was necessary to remove considerably more than the twelve centimètres. Two loops were inserted into the mesentery, so that after division the cut ends of the gut should not slip into the abdominal cavity; ligatures were also applied to the mesentery, so as to isolate the bowel from the entero-mesenteric circulation, and so to prevent hæmorrhage. The bowel was then divided by scissors transversely, and then the mesentery half-way between the ligatures and bowel. There was only a slight oozing of blood from the cut ends of the gut, which quickly yielded to irrigation with salicylic solution. The cut ends, when brought together, were found to be of different diameters, the lower being one-third smaller than the upper. This necessitated narrowing the upper by suture, sewing serous membrane to serous membrane. The lower end was cut obliquely, so as to make the aperture larger. The diameters being thus made equal, the two ends of the bowel were brought together, and one-half their circumference united by suture, using silk and very fine needles, the serous coat being first sewn, and then the mucous by other sutures. In the other half circumference this was naturally reversed, the mucous coat being first sewn, and then the serous. Twenty-seven stitches were put into the serous coat and a few less into the mucous, two millimètres (·08 inch) apart in the serous and three or four millimètres in the mucous, and as near as possible the cut edge. The intestine was then securely closed. The bowel was easily returned to the abdominal cavity, and the external wound closed, a drainage-tube being inserted. The operation lasted two hours; the patient was profoundly exhausted, and died of shock twenty-eight hours afterwards. At the *post mortem* examination, the abdomen was not tense; the external wound was united; the dressings were scarcely stained. The intestines were pale, except the part operated on, which was hyperæmic and red. The peritoneum was everywhere pale. The piece of intestine containing the suture was removed; there was firm union of the serous covering; even when the stitches were removed, it was found to hold water with no leakage. The union of the mucous coat was not so far advanced, but there were evident though delicate adhesions arising from the submucous connective tissue. Prati says that these results are very encouraging. He thinks this operation will be found to be one of the most useful of modern surgery.

G. D'ARCY ADAMS, M.D.

ARTICLE 1790.

THE FRENCH COMMISSION ON THE CHOLERA IN EGYPT.

M. STRAUS (*Le Progrès Méd.*, Nov. 17, 1883) has detailed to the Société de Biologie the results obtained by the French Commission sent to Egypt during the recent cholera epidemic. They made twenty-four necropsies: seven men, seventeen women, of whom five were pregnant. All were made about half an hour after death. The intestines contained the often described rice-like bodies, composed of agglomerated epithelial cells undergoing 'coagulation necrosis.' The cell-contents were turbid, and their nuclei could not be stained by carmine or aniline dyes. The material in both stomach and intestines contained numerous micro-organisms. The intestinal lesion, which was most marked at the lower part of the small intestine, consisted in superficial desquamation of the mucous membrane, not extending to the edge of Lieberkühn's follicles. After staining with methyl blue, the coats of the intestine could be seen to be infiltrated with bacteria and micrococci of all sorts and sizes, some very like the B. anthracis, others like B. tuberculosis, only smaller. It is to the latter that Koch attributes the characteristic lesion of cholera; but this organism, according to the French Commission, 'is not proper to the intestinal submucous coat, is not constant, and is only seen in certain conditions.' It is absent in rapid cases of cholera, and is 'scarcely observed until after ten or fifteen days.' The histological examination of the abdominal viscera, liver, spleen, kidneys, and lymphatic glands offered nothing

special. The blood did not coagulate. The red corpuscles precipitated, and the serum remained clear. Under the microscope the red corpuscles were spread out flat, and the leucocytes were numerous and very granular; between the corpuscles there were small elongated particles like the oidium lactis. Under the influence of heat these particles proliferated, and formed chains. Attempts to stain and cultivate these bodies failed. The supernatant serum was generally acid; in one autopsy made by M. Roux the acidity was observed in the blood and in the pericardial fluid. The state of the blood, and the rapidity with which cholera is often fatal indicate that the morbigenic element must be sought elsewhere than in the intestine. Attempts to convey the disease to pigs, dogs, fowls, turkeys, quails, cats, mice, &c., by making them swallow cholera stools, vomited matter, fragments of intestine, &c., were absolutely without result. Similar experiments by the German commission had like results, except that they had a few deaths from septicæmia. ROBERT SAUNDBY, M.D.

SURGERY.

RECENT PAPERS.

1791. DAVY.—Tibio-Femoral Impaction. (*Brit. Med. Jour.*, Oct., p. 758.)

1792. FAGAN.—Knee-Hæmarthrosis. (*Brit. Med. Jour.*, Sept., p. 561.)

1793. COPPINGER.—A Novel Method of Bleeding. *Brit. Med. Jour.*, Sept., p. 529.)

1794. CROFT.—Plaster-of-Paris Bandages, for Immediate Treatment of Fracture of the Leg, &c. (*Brit. Med. Jour.*, Sept., 1883, p. 559.)

1795. HEATH.—The Immediate Treatment of Fractures by Plaster-of-Paris Bandages. (*Brit. Med. Jour.*, Sept., p. 559.)

1796. OWEN.—The Treatment of Large Nævi. (*Brit. Med. Jour.*, August, p. 320.

1797. COATES.—The Treatment of Nævi. (*Brit. Med. Jour.*, August, p. 318.)

1798. ILLINGWORTH.—Immediate Application of the Splint in the Treatment of Whitlow. (*Lancet*, Oct., p. 667.)

1799. JEFFERSON.—Spina Bifida, masked by a Fatty Tumour. (*Lancet*, Oct., 1883, p. 633.)

1800. BALLANCE.—On Cholecystotomy. (*Lancet*, Oct., 1883, p. 585.)

1801. BUTLIN.—Parosteal Sarcoma of the Radius. (*Lancet*, August, p. 227.)

1802. GRAY.—A Case of Combined Scrotal and Abdominal Hæmatocele. (*Lancet*, September, p. 495.)

1803. MACKERN.—Sublingual Tumour due to Salivary Calculus. (*Lancet*, July, p. 55.)

1804. COUSINS.—A New Surgical Needle and Thread. (*Med. Times and Gazette*, Sept., p. 387.)

1805. MISHTOLT, A. D.—On the Curative Action of Erysipelas in Cases of Tumours (Erysipelas Medicatrix). (*Meditz. Pribav. k' Morsk. Sborn.*, 1883, June, pp. 47–52.)

1806. EVSEENKO.—The Treatment of Caries by Sand-Baths. (*Vratch*, 1882, No. 30, p. 502.)

1807. KAMPF.—A Case of Preputial Calculi. (*Vratch*, 1882, No. 26, p. 433.)

1808. SKLIFOSOVSKY, N.V.—On the Use of Iodoform in Surgery. (*Vratch*, 1882, No. 27, pp. 439-44.)

1809. ZAKHAREVITCH, V. M.—On the Reduction of Paraphimosis. (*Vratch*, 1882, No. 29, p. 471.)

1810. DIANIN AND SLAVIANSKY.—Cases of Colpocystotomy. (*Vratch*, 1882, No. 39, p. 660.)

1811. VELIAMINOFF, N. A.—On Fracture of the Neck of the Scapula. (*Vratch*, 1882, No. 31, pp. 514–15, and No. 32, pp. 529–32.)

1812. VOELKEL.—Recovery from Fracture of the Base of the Skull. (*Berliner Klin. Wochensch.*, Oct. 1.)

1813. LANDAU.—Operations on Abdominal Cysts, especially those of the Liver. (*Arch. für Klin. Chir.*, Band xxviii.; and *Centralb für die Med. Wiss.*, Sept. 29.)

1814. WHITSON.—The Operative Treatment of Hare-Lip. (*Edin. Med. Jour.*, July 1883.)

1815. BAYER.—Accumulators and Galvano-Cauteries.—(*Monatsch. für Ohrenheilk.*, Oct. 1883.)

1816. VOGEL.—Resection of the Vagus Nerve. (*Wiener Med. Blätter*, Oct. 11, 1881.)

1817. DUPLOUY.—Extirpation of a large Enchondroma of the upper end of the Humerus, with Preservation of the Articulation. (*Revue de Thérap.*, Sept., p. 229.)

1818. FOURNIER. — Exfoliative Marginal Glossitis. (*Jour. de Méd. Prat.*, Oct. 1883, p. 458.)

1819. DE ST. GERMAIN. — Alimentation by the Stomach-tube after Tracheotomy. (*Ibid.*, Oct. 1883, p. 453.)

1820. ROUX.—The Treatment of Internal Strangulation by Heat and Cold. (*Ibid.*, Oct. 1883, p. 453.)

1821. MARKS.—Trephining the Sternum for Removing Foreign Bodies from the Anterior Mediastinum. (*Amer. Med. Record*, June 9, 1883, p. 643).

ART. 1791. *Davy on Tibio-Femoral Impaction.*—Mr. Richard Davy, in the *Brit. Med. Jour.*, Oct. 1883, p. 758, publishes notes on twenty-one cases in which he performed excision of the knee. The last patient on whom Mr. Davy operated was a girl, aged 16, who had been in St. Thomas's Hospital thirteen years before, and on whom excision of the left knee joint had been performed for synovitis. On admission into Westminster Hospital, in Feb. 1883, there was great deformity of the leg, the back of the thigh resting on and touching the back of the leg, owing to the action of the hamstring muscles. On Feb. 13, 1883, Mr. Davy removed a rectangular wedge of bone from the tibia and femur, cut a mortise in the head of the tibia, and, shaping the femur as a tenon, placed the femur in the head of the tibia, and applied direct pressure on the left foot until impaction resulted into fixity of tenure. The leg was placed in a splint (a woodcut of which is given), and without any dressing the patient made a steady recovery. She gained thirteen inches in height, and walks well with a cork boot.

1792. *Fagan on Knee-Hæmarthrosis.*—Mr. Fagan (*Brit. Med. Jour.*, Sept. 1883, p. 561) read a paper at the annual meeting of the British Medical Association on 'The Nature, Diagnosis, and Treatment of Knee-Hæmarthrosis.' Notes are given of five cases of injury to the knee-joint, followed by rapid extravasation of blood into the joint. In each of them the knee-joint was aspirated and the blood drawn off, the patient recovering rapidly. A few years ago puncturing of the knee-joint was looked upon as hazardous, but now it is of frequent occurrence, and in the proper cases is followed by most satisfactory results; should the blood have coagulated, the question arises, whether opening the joint ought to be resorted to or not.

1793. *Coppinger on a Novel Method of Bleeding.*—Mr. Coppinger, in the *Brit. Med. Jour.*, Sept. 1883, p. 529, records a novel method of bleeding, which he practised on a fat full-blooded lady over 50 years of age. The patient's friends being horrified at the idea of 'bleeding,' Mr. Coppinger determined to try the effect of aspirating one of the veins. The needle of the aspirator was therefore passed into the left

external jugular, and four ounces of blood were withdrawn without difficulty. The result was so satisfactory, that after an hour the puncture was repeated, and six ounces more blood were drawn off. The patient recovered, and neither she nor her friends in the room had any idea that blood had been abstracted.

1794. *Croft on Plaster-of-Paris Splints for Immediate Treatment of Fractures of the Leg, &c.*—Mr. Croft, in the *Brit. Med. Jour.*, Sept. 1883, p. 559, reports that 901 cases of fracture have been treated by means of plaster-of-Paris splints with the best results. The author maintains that the splints are superior to the bandages of plaster of Paris. The plaster-of-Paris splints are made out of ordinary house flannel, which are dipped in wet plaster, and bandaged to the limb by a muslin bandage. Dr. Gay, of Boston, says that plaster-of-Paris bandages or splints have been in use for some years at Boston City Hospital with very satisfactory results. Plaster bandage in cases of club-foot is an excellent appliance after tenotomy. The case must be worn for a month at least.

1795. *Heath on the Immediate Treatment of Fractures by Plaster-of-Paris Bandage.*—Mr. Christopher Heath, in the *Brit. Med. Jour.*, Sept. 1883, p. 559, records his paper read at the annual meeting of the British Medical Association. The author advocates the immediate application of plaster-of-Paris bandages in cases of fractured patella, whereby the effusion into the joint is prevented ; and, in cases where effusion has already taken place, the blood may be got rid of by the aspirator, the joint then wrapped up in wadding, and a firm plaster-bandage applied, so that the patient walks about as soon as the plaster is dry. In cases of Pott's fracture of the fibula, nothing is so good as a boot of plaster properly applied, with the foot at a right angle to the leg. In fractured thighs of children, better results can be obtained by the immediate application of plaster of Paris over cotton-wadding, than even by Hamilton's double thigh splint with cross bar. Mr. Heath suggests that in many cases of fracture it is not necessary to insist on fixing the joint above and below the injury, thereby making cases for the 'bone-setter.' Fractures of the forearm are the only ones which the author does not think suited for treatment with plaster of Paris, for the obvious reason of the great danger of drawing the two bones together.

1796. *Owen on the Treatment of Large Nævi.*—Mr. Edmund Owen, in the *Brit. Med. Jour.*, August 1883, p. 320, communicates a paper on the treatment of large nævi. The variety treated of are vascular tumours varying in size from a dried raisin to a ripe fig, and which, situated in and beneath the skin and mucous membrane, are growing steadily. The treatment best adapted to these nævi is puncture with the thermo-cautery of Paquelin ; the larger the nævus, the larger the heated point. [The relative value attached by different observers to the cautery, ligature, and other means for the cure of nævi is seen at a glance in Sect. 737 of the *Medical Digest* ; the advocates for the ligature, applied in a variety of methods, nearly equalling in number those for the cautery and electrolysis.—*Rep.*]

1797. *Coates on the Treatment of Nævi.*—Mr. Martin Coates, in the *Brit. Med. Jour.*, August 1883, p. 318, communicates a paper on his experience in the treatment of different kinds of nævus. The treatment of superficial venous nævi which the author recommends, is that worked out by the late Dr. Marshall Hall, but which has been almost forgotten. The plan is thus described. A cataract-needle is introduced at about a line from the circumference of the nævus, and passed from the point of its entrance to the opposite extreme edge of the growth, keeping it in all its course as near as possible to the surface. The needle is then withdrawn almost to its point of entrance, and pushed again through the nævus at about the sixteenth of an inch from the line of the first puncture, and so on until the lines of puncture assume a fan-like shape. Nature perfects the cure. A small white spot soon makes its appearance in the centre of the growth ; this gradually spreads, and there is left in a few months a spot perfectly smooth, and whiter than the surrounding skin. For the cure of arterial nævi, Mr. Coates recommends the introduction of a needle at about a line from the nearest branch, keeping the flat of the needle at right angles to the skin, and pushing it steadily forward ; each vessel and branch is torn through in several directions. No pit or mark is left, only a patch of white skin. When a nævus, venous or arterial, exceeds a thickness of one-sixteenth of an inch, Mr. Coates has found great success in the use of hypodermic injections of undiluted tincture of iodine.

1798. *Illingworth on the Immediate Application of the Splint in the Treatment of Whitlow.*—Dr. Illingworth, in the *Lancet*, Oct. 1883, p. 667, writes that, in the treatment of whitlow, not only is early and deep incision essential, but that it is necessary to place the finger on a back splint, and to dress it frequently, so as to prevent all movement, and so favour healing, until the edges of the sheath of the tendons have properly united. By this means extensive suppuration is prevented, and the cure is more rapid.

1799. *Jefferson on Spina Bifida masked by a Fatty Tumour.*—Mr. Jefferson, in the *Lancet*, October 1883, p. 633, reports an interesting case of a female child, aged 4 years, with a tumour on the left buttock, which gave some pain ; there was also some incontinence of urine and fæces. Exploratory punctures were made into the growth, but no fluid was obtained ; then an incision was made into it, and some of the growth, of the nature of a fatty tumour, was removed ; suddenly, during the operation, a cyst was punctured, and about half an ounce of clear fluid gushed out. The wound was at once dressed with antiseptic gauze, and for three days the patient went on well ; then vomiting came on, with coldness of surface and feeble pulse ; these symptoms continued, and on the fifth morning after the operation the child had a convulsion and died. *Post mortem* examination showed a cyst coming out from below the spine of the first sacral vertebra, in which was the termination of the spinal cord. The cyst-wall, spinal cord, parietal layer of arachnoid, dura mater, and fat were fused into one mass. [A very interesting case of a fatty tumour simulating spina bifida was described and figured by Mr. Pollock in the *Lancet*, 1856. Vide *Medical Digest*, 1713 : 4.—*Rep.*]

1800. *Ballance on Colectomy.*—Mr. Ballance, in the *Lancet*, Oct. 1883, p. 585, publishes a few remarks with reference to some points in Mr. Lammiman's case of colectomy, published in the *Lancet* on Aug. 4. Mr. Ballance asks whether the stricture was due to scirrhus or to the new growth, known as columnar epithelioma, the naked eye appearances of

these growths being very similar. With reference to the passage of the rectal tube for such a long distance, while the stricture was comparatively a small way only from the anus, Mr. Ballance suggests that the rectal tube was bent upon itself on reaching the obstruction, as the fact was noticed in an experiment made upon a case previously to operation, after the abdomen had been opened. If such a case were to occur to Mr. Ballance as that in which Mr. Lammiman performed colectomy in the loin, the author suggests that an abdominal incision be made in the median line with a primary view to exploration; then, if applicable, he suggests that the stricture be brought out of the wound, the bowel ligatured on each side of it, the stricture excised, and the proximal end of the gut attached to the margins of a small incision, made by cutting down upon the finger placed within the abdominal cavity, through the iliac or lumbar regions of the abdominal parietes.

1801. *Butlin on Parosteal Sarcoma of the Radius.*—Mr. Butlin, in the *Lancet*, Aug. 1883, p. 227, records a case of parosteal sarcoma in a man aged 24. On the radial side of the left forearm, was a tumour as large as a small fist, but lobed and elongated. In the axilla was one enlarged gland, about the size of a nut. The tumour suddenly became very painful and increased rapidly, so that an operation was decided upon, when a large quantity of broken down blood-clot was turned out; the tumour, which, contrary to expectations, was nowhere attached to the bone, was scooped out, and an attempt made to save the limb. A few months afterwards a second operation was performed, and a recurrent growth removed from among the muscles on the ulnar side; subsequently a small growth was also removed. So far the limb has been saved, although the tumour was a mixed celled sarcoma.

1802. *Gray on a Case of Combined Scrotal and Abdominal Hæmatocele.*—Surgeon-Major Gray, in the *Lancet*, Sept. 1883, p. 495, records the case of a cart-driver, aged 36, who was admitted into hospital, suffering from great enlargement of the right side of the scrotum, and also from what appeared at first sight a distended bladder. After careful examination the case was diagnosed as one of hydrocele or hæmatocele, which had extended upwards along the spermatic cord and under the crural arch, and had finally formed a second sac for itself within the abdominal cavity. A small exploring trocar showed that the tumour was filled with blood, and subsequently five pints were drawn off with a larger trocar. The cavity was then syringed out with 5 per cent. carbolic acid lotion, and an ice-bag placed over the cord. By the third or fourth day after the operation, the tumours rapidly filled again, and percussion revealed that the cavity was filled with gases of putrefaction. A free incision was made into the scrotal tumour and a large quantity of decomposed blood-clot and fœtid matter was turned out; the patient was very weak, but improved slowly, and in a few days was able to undergo a second operation, when the redundant portion of the scrotal integument, together with the whole sac-wall below Poupart's ligament, was removed. From this time, the recovery was uninterrupted.

1803. *Mackern on Sublingual Tumour due to a Salivary Calculus.*—Dr. Mackern, in the *Lancet*, July 1883, p. 55, reports a case of a man, aged 51, who came to him with a large swelling in the mouth, causing great pain in the left ear and whole side of the head. The swelling had been coming several months, but had lately increased, and the glands under the jaw were painful and enlarged. Dr. Mackern diagnosed an inflamed and swollen sublingual gland due to obstruction of the duct, and at once introduced a probe into the duct. The probe passed but a small way; the canal was slit up with a bistoury; only a few drops of blood and some clear viscid saliva escaping. The patient was ordered to apply hot fomentations, internally and externally, and to return in two days. When he was seen again the first opening was enlarged, going backwards and somewhat downwards into the substance of the tumour. Suddenly the knife grated against something hard, and the nature of the case became evident. After a good deal of careful dissection, a whitish calculus was laid bare at a depth of about half an inch. The stone was dissected out, and was a hard, white, calcareous looking mass, measuring an inch and one-third in length, two-thirds of an inch in width, its weight being eighty-two grains.

1804. *Cousins on a New Surgical Needle and Thread.*—Dr. Ward Cousins, in the *Med. Times and Gazette*, Sept. 1883, p. 387, describes a simple invention, in which the ordinary steel needle is superseded by converting the end of the wire into a needle. The wire is cut into equal lengths, and each piece is separately reduced by drawing, with the exception of an inch or two at one extremity. The end is then converted into a convenient needle by pointing and burnishing. Messrs. Maw, Son, and Thompson supply the needles in silver or steel.

RICHARD NEALE, M.D.

1805. *Mishtolt on Curative Action of Erysipelas in Cases of Tumours.*—In the *Meditz. Pribav. k' Morsk. Sborn.*, June 1883, pp. 47-52, Dr. A. D. Mishtolt, of Nicolaiev, details an instance of what is sometimes termed 'erysipelas medicatrix.' A middle-aged sailor was admitted in the Nicolaiev Marine Hospital, on account of a sarcomatous tumour rapidly growing within the triangle between the crura of the left sterno-cleido-mastoid muscle. The new growth measured 8 × 4 centimètres. Following a recommendation issuing from Professor Panas, the author resolved to treat the case by parenchymatous injections of 5 per cent. solutions of chloride of zinc. On the eleventh day after the second injection, erysipelas appeared, starting from the point of the puncture, and afterwards creeping over the neck, shoulder, and anterior and posterior aspects of the chest. The inflammation ceased to spread on the twelfth day from its appearance. All the while muco-serous fluid oozed from the opening leading into the tumour, the latter becoming softer, and dwindling from day to day. Six weeks later the patient left the hospital, having no trace of the tumour. This was about a year ago. At present, another sarcoma grows on the same patient, its site now being near the left nipple. [A similar case has been lately reported by Dr. Stein; *see* the LONDON MEDICAL RECORD, May 1883, p. 186.—*Rep.*]

1806. *Evseenko on the Treatment of Caries by Sand-Baths.*—In the *Vratch*, 1882, No. 30, p. 502, Dr. Evseenko states that he successfully treats cases of caries by means of sand-baths. The diseased part is, for an hour or more daily, covered with a thick layer of hot dry sand. The method is especially serviceable in the practice among Russian peasantry, since the construction of stoves in their huts allows to make a kind of permanent sand-bed for the patient. The author mentions—1. A case of

two years' caries of the head of the femur, cured by sand-baths in six months; 2. An early case of caries of the pelvic bones and knee-joint, cured in four months; 3. An obstinate case of caries of the ribs, of two-and-a-half years' standing, with numerous fistulæ and profuse suppuration; in three weeks all the fistulæ were closed, and pus ceased to reaccumulate; 4. Several cases of caries of the bones of the foot, cured at intervals varying from five weeks to two or three months, &c.

1807. *Kampf on a Case of Preputial Calculi.*—In the *Vratch*, 1882, No. 26, p. 433, Dr. Kampf, of Oster, describes the case of a peasant, aged 28, who had since his childhood suffered from painful micturition, occasional retention of urine, and pains in the glans and the right iliac region, along the ureter. According to the patient's statement, he never had erections or sexual intercourse. Phimosis was found, and an incision made. The shallow preputial sac contained four calculi, varying in their size from a bean to a lentil. The prepuce was adherent to the whole superior half of the glans. After the operation, the pain ceased, and soon erections began to appear.

1808. *Sklifosovsky on the Use of Iodoform in Surgery.*—Professor N. V. Sklifosovsky, of Moscow, belongs to the most ardent partisans of the iodoform treatment of wounds. Undoubtedly, he has sufficient reasons for being satisfied with his favourite antiseptic. As his short report shows (*Vratch*, 1882, No. 27), of forty-seven cases of major operations which had been performed at his clinic from Oct. 1881 to May 1882, none died; all recovered. Only in four of these cases there were febrile symptoms, the highest temperature noted being 38°·6 C. (101°·5 Fahr.) In the remaining forty-three cases, the course was absolutely apyretic. The age of the patients operated on varied from 3 to 82. In eighteen patients tumours of various descriptions were removed (carcinoma, 5 cases; sarcoma, 6; lipoma, 3; struma cysticum, 1; atheroma, 1; angioma, 1; osteoma, 1). In one, ovariotomy was performed after Le Dran's method; that is, the remnants of the irremovable cyst were sewed to the lips of the abdominal wound; in two, rhinoplastic operations; in one, herniotomy; in two, sequestrotomy; in three, amputations (two crural, one femoral); in two, resection (in one, of the knee; in another, of the elbow). In one of the patients an aneurysmal sac of the brachial artery was excised; in one both sciatic nerves were stretched (for tabes); in six, fistulæ ani were divided, &c. The author never saw any instance of surgical iodoform-poisoning, and ascribes his success to almost exclusively using Dr. Heidenreich's iodoform-gauze (see the LONDON MEDICAL RECORD, Jan. 1883, p. 8). 'To create a zone of iodoform-atmosphere around the wound;' this is all that is necessary for aseptic purposes, and it is in full measure supplied by Heidenreich's gauze. The use of iodoform powder must be retained only for the cases in which gauze-dressing is inapplicable (deep cavities, &c.); at all events, powdering and sprinkling must be practised with moderation and caution.

1809. *Zakharevitch on the Reduction of Paraphimosis.*—In the *Vratch*, 1882, No. 29, p. 471, Dr. V. M. Zakharevitch describes the method of the reduction of paraphimosis which he successfully employed in thirty-six cases, occurring within three years. Having well anointed the strangulated parts, he placed the tips of his thumbs and fingers round the glans (so as to encircle it completely) and then began to produce a gradually increased pressure. As a rule, within three or four minutes the glans became shrunken to about its normal size; when this point was reached, the author, continuing to keep up the pressure by means of the thumbs, and the ring and little fingers, rapidly placed the fore and middle fingers at the constricting ring and pushed the prepuce over the diminished glans. Reduction followed easily and painlessly. In the most difficult of the cases the manipulations required fifteen minutes. The ages of the author's patients were between 3 and 57 (two patients were 3 years old; five, 4; three, 5; seven, 6; five, 7; three, 15; two, 16; five, 20; two, 21; one was 27, and one 57). The duration of the strangulation was from twelve hours to thirty days (in eight patients paraphimosis had lasted about twelve hours; in five, twenty-four hours; in six, two days; in two, three days; in five, four days; in three, seven days; in two, eight days; in one, ten days; in two, fourteen days; in two, thirty days). In eight cases, paraphimosis was brought about in consequence of an intentional retraction of the prepuce when balanoposthitis was present, and in five cases of soft chancre; in six, paraphimosis was produced by the first coitus; in nine, by masturbation; in two children the retraction was made by young nurses, and in six by little girls, playmates of the patients.

1810. *Dianin and Slaviansky on Two Cases of Colpocystotomy.*—At a meeting of the St. Petersburg Russian Medical Society, Dr. Dianin and Professor Slaviansky (*Vratch*, 1882, No. 39, p. 660) recorded their cases of vaginal lithotomy. Dr. Dianin's patient, aged 29, was admitted with complaints of difficult and painful micturition. Sounding of the bladder detected a large calculus, which was easily removed through an incision, five centimètres (about two inches) long, in the anterior vaginal wall. The wound was closed with six metallic sutures, and healed by the first intention. The patient got up on the sixth day, and left the hospital well four weeks after the operation. Professor Slaviansky's patient, aged 44, presented, beside a stone in the bladder, a vesico-vaginal fistula admitting a fine lacrymal sound. As in Dianin's case, the stone was extracted through an incision in the anterior vaginal wall. The wound, closed with eleven metallic sutures, rapidly healed; but the fistula persisted, and was again sutured. Professor Slaviansky thinks that colpocystotomy, in regard to its easy performance and favourable results, may successfully compete with lithotrity.

1811. *Veliaminoff on Fracture of the Neck of the Scapula.*—In the *Vratch*, 1882, Nos. 31 and 32, Dr. N. A. Veliaminoff, of Professor K. K. Reyher's clinic, St. Petersburg, contributes an able paper on fracture of the neck of the scapula, and details five cases of this rare lesion admitted to the clinic within these four years. [To show the degree of rareness of fracture of the scapula, the author quotes the following figures. Of Gurlt's 4,310 cases of fracture, only 47 (10·9 pro mille) affected the scapula; of 51,938 cases of fracture admitted to the London Hospital, from 1842 to 1877, only 425 (8·1 pro mille); of Drecker's 2,021 cases, only 14 (6·9 pro mille); of Lonsdale's 1,901 cases (Middlesex Hospital, in a period of six years), only 18, two of them being fractures of the neck of the scapula. Of 1,578 cases of fracture admitted during five years to Pennsylvania Hospital, there were only 14 of the scapula,

only one of them being a fracture of the neck of the bone; of Lente's 1,722 cases (New York Hospital, 12¼ years), 17 were cases of fractured scapula, one of them affecting the neck of the bone. Finally, Professor Billroth saw only four cases of fracture of the neck of the scapula during sixteen years.] In all five patients, the so-called surgical neck of the scapula (that is, the part of the bone which separates the glenoid cavity, coracoid process, and supra- and infra-articular tubercles from the rest of the scapula) was fractured. As in all known cases of the lesion, the fracture was caused by the shoulder coming into violent contact with a hard object (mostly by a fall on the shoulder.) The symptoms characterising the injury are thus described by the author. The head of the humerus is displaced, while the limb is elongated; the shape of the shoulder is markedly altered; its whole anterior aspect is flattened and smoothed, no deltoid bulging being visible; the external outline of the shoulder presents a less convex curve; the acromion is markedly discernible and prominent, being separated from the head of the humerus by a groove or pit. In recent cases, active movements are absent not only in the shoulder-joint, but also in the elbow. Passive movements in the shoulder-joint, though possible, are still limited, and usually painful. The muscles are not rigid. The deformity of the shoulder may be easily corrected when the surgeon fixes the scapula by grasping the shoulder with one of his hands, and pushing the humerus upwards with the other; the elongation of the injured limb then disappears, and the whole region of the shoulder resumes its normal appearance. Besides these chief symptoms there are sometimes observed—crepitation on the rotation of the humerus; a change in the direction of the axis of the humerus (slight adduction); and the presence of the edge of the fractured bone in the axilla. Of the author's five cases, in three the formation of false joints followed; in the other two the issue remaining unknown. All the patients were treated by a tightly applied Desault's bandage.

V. IDELSON, M.D.

1812. *Voelkel on a Case of Recovery from Fracture of the Base of the Skull.*—Dr. A. Voelkel, of Berleburg, Westphalia, relates the following case in the *Berliner Klin. Wochensch.*, Oct. 1, 1883. J. H., a road labourer, on the evening of May 25, 1879, received a blow on the left temple from the blunt end of a pickaxe. On May 27 there was on the seat of the blow a soft, dough-like swelling of about a hand's breadth, of a dark red colour, and increased temperature. A dark sugillation was observed behind the left ear and upon the mastoid process. The extravasation extended as far as the eyelids and eyeball on the same side. The patient stated that considerable hæmorrhage had occurred from the left ear on the night of the 25th–26th, especially if he lay on his left side, when it would stream forth. A discharge of a 'watery' fluid followed for several days. Hearing was much impaired on the left side. Epistaxis also had occurred occasionally. After May 27, paralysis of the left facial muscles had been observed. During the first hour after the receipt of the injury the patient had vomited frequently; subsequently he had complained of nausea, vertigo, and pain in the left side of the head. He slept badly. His pulse was 100, and intermittent. He complained of thirst. A close examination detected rupture of the membrana tympani. Vision was not impaired; the pupils were normal. The treatment consisted in leeching and the administration of saline aperients. In about four weeks' time he resumed his occupation as a road labourer. By July 22, 1881, the paralysis of the facial muscle had diminished; but he had giddiness on closing his eyes, so that he could not stand securely. He was nearly wholly deaf of the left ear, from which the discharge continued. His general health was good. His memory was much enfeebled. In September 1883 he still suffered from giddiness, especially on lying down; deafness remained; his memory had improved. An interesting point in this case is the gradual disappearance of the facial paralysis, indicating either a temporary stretching of the nerve, or a degree of neuritis from the presence of blood in the bony canals. It is not easy to determine whether the total deafness may be due to the laceration of the membrana tympani, or to a lesion of the auditory nerve.

1813. *Landau on Operations upon Abdominal Cysts, more particularly those of the Liver.*—Dr. J. Landau (*Arch. für Klin. Chirurg.*, Band xxviii., and *Centralbl. für die Med. Wiss.*, Sept. 29) advances his method of treating abdominal cysts as possessing the advantage that a multiplicity of cysts, or the presence of adhesions, do not give rise to difficulties in operating. The plan adopted by Dr. Landau is to make a vertical incision through the integuments over the cyst as high as the border of the ribs, an exploratory puncture having first been made. The peritoneum is then to be fixed to the abdominal walls by sutures. The cyst being drawn or pressed forward by an assistant, a fine cannula is inserted to evacuate the fluid. The distended cyst becomes flaccid, and can be drawn outwards; its slackened walls can then be fixed by sutures to the integuments. The remaining fluid can then be emptied, or is expelled by the respiratory action; none can escape into the peritoneal cavity. The cavity of the cyst becomes obliterated by granulation.

W. B. KESTEVEN, M.D.

1814. *Whitson on Operative Treatment of Hare-Lip.*—In a paper on the operative treatment of hare-lip read before the Glasgow Royal Infirmary Medical Society, and published in the *Edin. Med. Jour.*, July 1883, Dr. James Whitson advocates early operative interference in the treatment of this deformity. There may, he states, be drawbacks to an operation during the first six weeks of life, but these are more than counterbalanced by the advantages which follow in its wake. It is the clear duty of a surgeon, when called upon to treat a child who is losing flesh by the milk running out of the nose, to take immediate steps for the correction of the defect; and delay only diminishes the chance of a primary union, because the patient is gradually growing thinner, and becoming less able to cope with any strain on the system. It is pointed out that, where the hare-lip is complicated with cleft palate, the early removal of the former is one of the greatest adjuncts towards the future and successful treatment of the latter, inasmuch as the steady compression of the united lips exercises a wonderful effect in approximating the edges of the fistula towards one another. The author insists on the importance of freeing the lip from the gums as the first step in the operation. It is recommended that a small knife be used for this purpose. It is a good plan, Dr. Whitson thinks, to apply a suitable pair of clamps for the prevention of hæmorrhage during the cutting of the flaps, and throughout the subsequent process

of suturing the newly freshened surfaces. He has himself devised clamps for this purpose, which are stated to be light and handy, and do not impede the surgeon during the operation. In paring the edges of the cleft it is better, according to Dr. Whitson, to take too much than too little ; and he states that, if the surgeon be not afraid to go widely clear of the prolabial edges of the fissure, the result will assuredly be better from every point of view. There are broader surfaces to bring together, which admit an easy and accurate apposition, and the chances of permanent union are augmented, because there are a greater number of vascular points capable of throwing out branching loops with their fellows on the opposite side. Moreover, the sutures obtain a better grasp of the structures through which they pass ; and, from the stable nature of the parts in question, consequent upon their breadth, there is little likelihood of any after-displacement taking place. The vertical depth of the lip is also greater where a broad margin has been removed, and therefore there is less fear of the dreaded notch presenting itself after healing. Dr. Whitson does not detach the parings *in toto*, but utilises them in the manner advocated some years ago by Dr. Maurice Colles, in order to counteract the tendency towards the formation of a notch. In approximating the recently pared edges, use is made of sutures either of silver wire or of chromicised catgut. Hair-lip needles or pins, Dr. Whitson states, have to a great extent been discarded by most surgeons. They leave marks, necessarily enlarged by tension and in proportion to the length of time they are allowed to remain *in situ*. In passing the sutures a curved needle is recommended as the best to work with, and Lister's needle, with a groove above the eye, into which the suture sinks, is held to be the most convenient. The highest or nasal suture is to be passed first, and no pains should be spared to see that it fulfils its function efficiently ; for, if there be any ulceration here, the lip has an inclination to be drawn upwards. The second suture is to be placed at the opposite extremity, and then one or two follow these. If the sutures be inserted from alternate sides, the balance of the lips will be more equally sustained. In removing the stitches it will be found expedient, Dr. Whitson thinks, to put the patient under chloroform. W. JOHNSON SMITH.

1815. *Bayer on Accumulators and Galvano-Cauteries.*—In the *Monatsch. für Ohrenheilk.* for Oct. 1883, Dr. L. Bayer, of Brussels, gives some results of his experience with accumulators in operations with the galvano-cautery. If his results be confirmed by future trials, we have indeed enlisted an agent in medicine and surgery of the greatest importance. The trouble experienced in keeping the galvano-cautery in proper working order, its non-portability, and, above all, its want of constancy, has prevented it from taking the place in the surgeon's usual armamentarium which it ought to do. With two Bunsen's cells and a Faure's accumulator, Dr. Bayer avers that all these difficulties are set aside. With an accumulator of seventy-six kilogrammes, charged from two Bunsen's cells, he performed operations daily for two months without being able to determine any decrease in the strength of the accumulator. With such an accumulator, a platinum wire of $\frac{75}{100}$ of a millimètre in diameter, and ten centimètres long, was made red hot for the space of five minutes ; and half an hour later a platinum wire of $\frac{58}{100}$ of a millimètre in diameter, and twenty centimètres long, was kept red hot for the space of fifteen minutes. Using two of Faure's accumulators of 75 kilogrammes, he found that the strongest of Voltolini's instruments for galvano-cautery operations was instantaneously at a white heat, and the current required to be interrupted at once. A platinum wire of $\frac{63}{100}$ millimètres was made red hot for 26 centimètres, and one of $\frac{51}{100}$ for 56 centimètres. With three accumulators of the same size attached to the instruments they became useless for operation, as they were melted at once. Dr. Bayer says that, where it can be conveniently done, it is best to charge the accumulator with an electro-dynamic machine, and when that is not to be obtained, he prefers two of Bunsen's elements or two of Bruin's ; and advises that the accumulators should be allowed to stand charged for a few days before using them. From theoretical and practical observations, he has determined to use four smaller accumulators than those with which he made the above experiments, hoping thereby to be able better to regulate the intensity of the current ; and he promises to give the result in a future number. W. LAIDLAW PURVES.

1816. *Vogel on Resection of the Vagus Nerve.*—Dr. Vogel, assistant to Professor Kocher, of Berne, communicates to the *Wiener Med. Blätter* of Oct. 11 and 18 three cases of resection of the vagus which have recently occurred in the professor's clinic. In all three the operation was undertaken on account of carcinomatous tumours, which involved the sheath of the nerve ; two were left and one right-sided ; one (left-sided) recovered from the operation, and two died, one in consequence of the blood lost during the operation, the other from secondary hæmorrhage. In spite of the two deaths, the author is of opinion that the operation is to be recommended, as the superior laryngeal nerve, supplying the lungs, is given off too high to be interfered with, and the nerve left intact on the other side is sufficient for carrying on the functions of the branches which suffer. ALICE KER, M.D.

1817. *Duplouy on Extirpation of a Large Enchondroma of the Superior Extremity of the Humerus with Preservation of the Articulation.*—The tumour (*Revue de Thérap.*, Sept. 1883, p. 229) had appeared in the region of the deltoid impression six years before the operation, and had reached the size of a fœtal head ; there was no œdema and no paralysis of the limb ; the scapulo-humeral articulation was freely movable. During the operation, which was performed on July 21, by Dr. Duplouy, of Rochefort, it was found that the pedicle of the tumour was narrow, and could be easily scraped from the humerus without damage to the articulation or to the bone. The patient made a good recovery, and there has been no recurrence of the tumour.

1818. *Fournier on Exfoliative Marginal Glossitis.* This is the name given by M. Fournier (*Jour. de Méd. Prat*, Oct. 1883, p. 458) to a peculiar and relatively rare inflammation of the tongue, well described in a monograph recently published by M. G. Lemonnier. This form of glossitis is found most frequently in children, but may be observed also at an advanced age. The causes are obscure. It has been considered as a syphilide (Parrot) ; but the relation is far from constant, and the same may be said of dyspepsia and malnutrition. Some of M. Lemonnier's patients had made an excessive use of tobacco or of alcohol ; others had suffered from nervous diseases, rheumatism, or herpes. The three

characteristic symptoms of the affection are: an irregular and sinuous patch of superficial inflammation and desquamation; a raised margin of whitish or greyish colour surrounding the diseased part; a tendency to migration, causing the lesion to change its form and seat very rapidly. It is either unilateral or bilateral, and is never accompanied by pain, so that it may remain for a long time undetected. It has often been confounded with the glossitis of smokers, cachectic glossitis, and some forms of mucous tubercle. Cauterisations have no beneficial effect. The best treatment consists in the avoidance of irritating food and drink, and in the use of soothing applications or pulverisations.

1819. *De Saint-Germain on Alimentation by the Stomach-tube after Tracheotomy.*—According to M. de Saint-Germain (*Jour. de Méd. Prat.*, Oct. 1883, p. 453), defective alimentation is the great obstacle to the complete recovery of children after tracheotomy. This may be caused by the aversion of the child for food, or by dysphagia, in consequence of cauterisation or of paralysis of the velum. M. de Saint-Germain thinks that the use of caustics in diphtheria must be deprecated as useless, and liable to cause serious difficulty in swallowing. In a case of paralysis of the velum where the child had been much weakened by want of food, he passed a stomach-tube through the nostril and injected into the stomach wine, broth, and milk. After some time the parents of the child learnt how to introduce the tube themselves, and in a fortnight the patient had entirely recovered.

1820. *Roux on Treatment of Internal Strangulation by Heat and Cold.*—Dr. G. Roux relates (*Jour. de Méd. Prat.*, Oct. 1883, p. 453) the case of a man, aged 42, who had suffered eight days from symptoms of acute internal strangulation, and whose condition seemed to be quite beyond hope. After other means had failed, Dr. Roux tried successive and repeated applications to the abdomen of an ice bag and of Mayor's hammer, dipped in boiling water. The pain was very acute, and numerous bullæ formed on the skin. Then, during the whole day, hot wool and the ice-bag were in turn applied to the abdomen. In the evening, flatus passed by the rectum, and the vomiting ceased during the night; on the following morning the bowels acted, and convalescence was established. Dr. Roux thinks that the successive action of heat and cold acts on the muscular walls of the intestine somewhat in the manner of an induced electric current. J. S. KAESER, M.D.

1821. *Marks on Trephining the Sternum for Removing Foreign Bodies from the Anterior Mediastinum.*—Dr. S. Marks, of Milwaukee (*Amer. Med. Record*, June 9, 1883, p. 643), gives the history of a soldier, who was struck on the sternum by a spent bullet (Minié?) during one of the battles of the Wilderness. He was knocked down by the blow. When he recovered sufficiently, he went to the rear, when he was examined by the field-surgeon, who assured him there had been penetration. He was sent from one hospital to another, and examined by various surgeons. At last he was sent to one of the hospitals at Washington, which he did not recollect, where he was repeatedly examined by the hospital surgeons, and by others, without any suspicion of a foreign body behind the sternum. His condition at this time was such that, fearing he would die in the hospital, he returned to his home in Ohio, where he was mustered out. In the course of time he came under D'. Marks's and partner's care, with the determination to submit to any treatment that they might advise. The Nélaton probe not answering their purpose, they improvised a probe of the stem of a clay-pipe, which was introduced into the wound, passing some distance. On removing the probe, it showed unmistakable signs of lead. The operation of trephining the sternum was determined upon. When the piece of bone was removed by the trephine, the bullet was found to be a little below the point of operation. The trephine was again applied and the bullet, together with the sac which surrounded it, was removed. There was a considerable discharge of pus. The patient, after recovery from the operation, still had some cough, pain, and shortness of breath. He went to work, when one day, after jumping from some elevation, he was seized with violent hæmorrhage from the lungs. After recovering from the effects of this hæmorrhage, the patient found himself entirely free from the symptoms which had existed before the accident.

MEDICINE.

RECENT PAPERS.

1822. BRAJNIKOFF, B. P.—A Case of Relapsing Fever combined with Small-pox. (*Ejened. Klin. Gazeta*, May 15, 1883, pp. 316–17.)

1823. POPOFF, M.—Observations on Typhoid Fever. (*Meditz. Pribav. k' Morsk. Sborn.*, Sept. 1883, pp. 52–62.)

1824. IRVING.—The Conveyance of Cholera in India. (*Brit. Med. Jour.*, Oct. 1883, p. 727.)

1825. CHEVERS. — Cholera Asiatica Maligna. (*Med. Times and Gazette*, Oct. 1883, p. 481.)

1826. NEALE.—The Relations of Copper Works and Cholera. (*Brit. Med. Jour.*, Oct. 1883, p. 804.)

1827. FLINT.—Early Tapping in Cases of Ascites. (*Brit. Med. Jour.*, Sept. 1883, p. 565.)

1828. SUCKLING.—Nine Cases of Pneumonia of the Upper Lobe. (*Brit. Med. Jour.*, Nov. 1883, p. 874.)

1829. BOWEN.—Croupous Pneumonia treated by Cold Sponging. (*Brit. Med. Jour.*, Nov. 1883, p. 957.)

1830. SONSINO.—Cases of Filaria Sanguinis observed in Egypt. (*Med. Times and Gazette*, Sept. 1883, pp. 340, 367, 421.)

1831. OXLEY.—Scarlet Fever. (*Lancet*, Oct. 1883, p. 717.)

ART. 1822. *Brajnikoff on a Case of Relapsing Fever combined with Small-Pox.*—In the *Ejened. Klin. Gazeta*, 1883, May 15, p. 316, Dr. B. P. Brajnikoff publishes a case in which a patient, aged eighteen, admitted for relapsing fever, during the fourth relapse of the latter developed all the signs of small-pox. Microscopical examination of the blood after the appearance of variolous rash showed the presence of Obermeier's spirilla. The small-pox took its usual course. The patient recovered.

1823. *Popoff on the Treatment of Enteric Fever.*—Dr. M. Popoff, of Cronstadt Marine Hospital, summarises (*Meditz. Pribav. k' Morsk. Sborn.*, Sept. 1883) his views on the subject thus. 1. Antipyretics (quinine and salicylates) administered during the first stage (the stage of high febrile movements) of enteric fever are decidedly unable to produce any substantial influence on the course of the thermometric curve. 2. Cold baths are a dangerous plan of treatment, since they are apt to lead to serious complications, especially to chronic inflammation of the lungs. [The author's observations, on

which his opinions are based, were made during a winter season.] 3. On the contrary, cold wet affusions and rubbing may be safely and successfully employed during the whole period of high febrile temperatures. 4. The most careful attention must be paid to keeping up strength of the typhoid patients by a liberal nourishing diet. On a slightest sign of prostration, there are indicated internal administration of stimulants (brandy, to four ounces daily) and hypodermic injections of camphor solution in ether (camph. gr. x., ether ℥ss., from 1 to 3 syringefuls, twice a day). Of his forty-five patients, the author lost 3, or 6·6 per cent. V. IDELSON, M.D.

1824. *Irving on the Conveyance of Cholera in India.*—Dr. Irving, in the *Brit. Med. Jour.*, Oct. 1883, p. 727, gives instances of cholera being carried by human beings from an infected district to those previously perfectly free from the disease. Several instances are extracted from a report published by Mr. Purves, in which it is shown that human intercourse seemed undoubtedly to be the immediate cause of the appearance of cholera in a great number of cases. [Numerous cases for and against the theory of the infection and contagion of cholera are noted in sect. 916 : 4 of the *Medical Digest.* The case recorded by Dr. Lewis in the *Lancet*, June 1877, p. 824, is certainly worth the careful consideration of those who are opposed to the idea that cholera can be conveyed from one person to another. *Rep.*]

1825. *Chevers on Cholera Asiatica Maligna.*—Dr. Chevers, in the *Med. Times and Gazette*, Oct. 1883, p. 481, concludes his remarks on the treatment of cholera from p. 371. With regard to the use of calomel, the author prefers, when the bilious stools are either absent or scanty, or, when scanty, bilious vomiting is present, to use free counter-irritation by sinapisms, followed by large hot poultices over the whole hepatic region, and to solicit hepatic action by frequent gentle aperient doses and enemata. In chloro-uræmia the action of the bowels is generally deficient; and it cannot be too emphatically insisted on, that prolonged constipation in the stage of reaction is always a cause for anxiety, and that the use of moderate enemata gently stimulates the action of the lower bowel, also producing a reflex impression upon the liver. After reaction has set in, the utmost harm is done by the use of astringents, narcotics, and stimulants. Quinine cannot be looked upon as a prophylactic in cholera; but, when the disease is raging, a dose of quinine as a nervine tonic ought to be taken by everyone in the affected district, and thus many would be saved from the disease. The great secret of success in cholera is *sedulous care and good nursing.* The specific treatment by some routine method is no good, since no two cases are alike, and no treatment can be good unless great regard be paid to the conditions of the kidneys and liver.

1826. *Neale on the Relation of Copper-Works and Cholera.*—Dr. Neale, in the *Brit. Med. Jour.*, Oct. 1883, p. 104, writes suggesting that the widely divergent views, as to the value of the copper-cure for cholera, may be reconciled if we accept the truth of Mr. Tuson's assertion, that sulphur-fires will banish cholera from any district where it is raging. As around copper-works there is always a large evolution of sulphurous fumes, it may be to these gases that the immunity is due, and not to the metal itself, or to any of its salts. [At Section 922 of the *Medical Digest*, much that has been written upon the use of sulphur and sulphurous acid, and upon the value of being near copper-works, may be consulted.—*Rep.*]

1827. *Flint on Early Tapping in Ascites.*—Dr. Austin Flint, in the *Brit. Med. Jour.*, Sept. 1883, p. 565, recommends the practice of early tapping in cases of ascites. Twenty years ago, in concluding a report on ascites, the author used the following language. 'Unpromising as are the majority of cases of ascites, I cannot but believe that, as regards prolongation of life, and as much improvement as is compatible with existing structural disease, the success of medical practice would be enhanced by employing less than has been the custom of physicians, diuretics, hydragogues, cathartics, and other depressing medicines, by resorting earlier than is usually done to tapping, and by a greater reliance on tonic medication, together with hygienic measures to invigorate and strengthen the system.' The experience of twenty years compels Dr. Flint to still hold to the same belief. Notes on twelve cases of ascites are appended to the report, in all of which tapping was resorted to. [In 1873, Dr. McCrea strongly advocated early tapping, combating, in a most interesting paper, the doctrine of delay advocated by Murchison and other authorities. Vide *Medical Digest*, section 1000 : 2.—*Rep.*]

1828. *Suckling on Nine Cases of Pneumonia of the Upper Lobe.*—Dr. Suckling, in the *Brit. Med. Jour.*, Nov. 1883, p. 874, records nine cases of pneumonia occurring in the upper lobe. Out of thirty-three cases admitted during four months of 1883, nine were in the upper lobe. Dr. Suckling remarks that these patients, in the great majority of cases, had suffered from previous lung mischief, such as chronic bronchitis or emphysema, or some phthisis at the apex; in such cases the mortality is great, seven out of eight of the author's cases proving fatal, and in all from heart failure.

1829. *Bowen on Croupous Pneumonia treated by Cold Sponging.*—Mr. O. Bowen, in the *Brit. Med. Jour.*, Nov. 1883, p. 957, supplements a case reported by Dr. Day in the *Journal* of Oct. 13, where a child, with pneumonia, was treated by cold sponging. Mr. Bowen's case was that of a man, aged 21, who was seized with a rigor and pain in the right side. The treatment adopted was cold sponging over the body and limbs, two or three times a day at first; and then, when the temperature reached 104°, and the usual signs of consolidation were marked, the sponging was ordered every hour, which had the effect of reducing the temperature in a few hours to 101°·8, and the patient steadily improved.

1830. *Sonsino on Cases of Filaria Sanguinis observed in Egypt.*—Dr. Sonsino, in the *Med. Times and Gazette*, Sept. 1883, pp. 340, 367, 421, supplies further information as a supplement to his paper published in the *Med. Times and Gazette* of May 1882, on filaria sanguinis hominis. Since March 1882, the author has observed in all twenty-two cases; in thirteen of these lymphuria was observed. Two cases are also noted, in which hæmaturia was present, due to the presence of filaria without any Bilharzia being detected. In two cases, filariæ were found associated with lung disease. Two cases are related in which lymphuria was present, and in which, after careful searching, no filariæ were found. Dr. Sonsino draws up the following conclusions from his experience of twenty-two cases. 1. Filariated individuals may live long without presenting disorders of importance, and even enjoy good health. 2. During their infection

they are liable to attacks of lymphorrhagia, and especially of lymphuria, the lymphorrhagia in some cases assuming the form of lymphocele. 3. Hæmorrhage, and especially hæmaturia, may also be the sequel of the filarial parasitism, but exceptionally; and probably they are the consequence of the passage of mature filariæ into the blood-vessels. 4. In Egypt, hæmaturia, even in filariated patients, is generally due to the co-existence of Bilharzial disease. Dr. Sonsino examined, besides the mosquito, several species of gnats (culex pipiens). In a common flea (pulex irritans) which was examined, a few embryo filariæ, which were dead, were detected in the contents of the stomach. Several specimens of the common bug (cimex, or acanthia lectularia) were examined, and were found to be infected with the embryo filariæ, which, however, were not found to live much longer than twenty-four hours after the capture of the cimex. Never were filariæ found modified so as to lead to the belief that any transformation occurred of the embryo whilst in the body of the cimex, as have been observed in the body of the culex. The author remarks that further observations ought to be made with regard to the temperature and hygrometric state of the air, which are necessary for the rearing of filariæ in the intermediary host.

1831. *Oxley on Scarlet Fever.*—Dr. Oxley, in the *Lancet*, Oct. 1883, p. 717, describes the different forms in which scarlet fever may be met with. Reference is made to the case of a child under 3 years of age dying rapidly of convulsions, without any reason being discovered, until, a day or two afterwards, an inmate of the house develops scarlet fever. The convulsion is explained by the patient having died of an excessive dose of scarlet fever poison. In some cases the symptoms may be all concentrated on the fauces; and a question arises whether it is quinsy or scarlet fever, and if it be right to move the patient to a fever hospital or not. The author advises that it is best to wait until a rash appears before moving the patient. Other cases are met with where the symptoms simulate diphtheria, and the disease is so rapidly fatal that no rash appears. Cases are also met with where the symptoms are very slight; no typical rash, no sore throat, and very slight constitutional disturbance. With regard to what is termed surgical scarlet fever, Dr. Oxley says it is true scarlet fever modified. The author also remarks that he has not seen German measles in so marked a type as to feel justified in giving it a place as a distinct disease, and thinks that the disease as described by those who have studied it has all the characteristics of measles. With regard to the mode of infection, it is stated that a certain quantity of the poison is needed, and that this quantity is not carried by medical men from house to house in the course of their visits, provided they take moderate care. In cases where scarlet fever is complicated with rheumatic fever, it is advised to rely on quinine and tonics and not to administer salicylates, as the skin and kidneys are not in a fit condition to do any extra work, and the joint-affection in these cases is not severe as a rule.

RICHARD NEALE, M.D.

BLEEDING.—M. Guyot has raised the question whether bleeding as a method of treatment ought not to be abandoned. He was called in to treat an attack of apoplexy, and had recourse to bleeding; the patient lost barely the value of half a tumbler of blood when he fell into a state of syncope and died.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1832. BIDDER.—Diet in Tuberculosis. (*Berliner Klin. Wochensch.*, 1883, No. 47.)

1833. SATLOW.—The Treatment of Diphtheria with Oil of Turpentine. (*Jahrb. für Kinderheilk.*, Band xx., Heft 1.)

1834. MARAGLIANO.—The Therapeutic Properties of Quebracho Bark. (*Centralbl. für die Med. Wiss.*, Oct. 27.)

1835. LEVIEZ.—The Treatment of Fœtid Bronchitis by Hyposulphite of Soda. (*Jour. de Méd. Prat.*, Oct. 1883, p. 472.)

1836. PICK.—Creasote in Diseases of the Air-passages. (*Deutsche Med. Wochensch.*, No. 13, 1883.)

1837. MICHAEL.—Hypodermic Injection of Solution of Common Salt in Cholera. (*Deutsche Med Wochensch.*, Sept. 25.)

1838. KIRNBERGER.—Inhalation of Oxygen in Leukæmia and Pseudo-leukæmia. (*Deutsche Med. Wochensch.*, Oct. 10.)

1839. BOZZOLO.—Lukewarm Baths in Pneumonia and Enteric Fever. (*Centralbl. für Therap.*, Aug. 1883.)

1840. HEIN.—The Treatment of Trichinosis. (*Communications of the Wiener Med. Doctorencollegiums*, No. 4, 1883.)

1841. POPOFF, P.M.—On the Treatment of Toothache by Subcutaneous Injection of Pilocarpine. (*Vracheb. Vedom.*, 1882, No. 543, p. 3551.)

1842. GOLUBOFF, N. F.—On the Action of Kairin on the Febrile and Healthy. (*Meditz. Obozr.*, March 1883, pp. 481–85.)

1843. ENKO, P.—Remarks on the Action of Cinchonin. (*Meditz. Obozr.*, March 1883, p. 483.)

1844. TRUSEWICZ, J. J.—On Glonoin in Angina Pectoris. (*Ejened. Klin. Gazeta*, Sept. 11, 1883, pp. 382-4, and Sept. 18, pp. 404-5.)

1845. VORONIN, V. M.—A few Statistical Data Concerning the Influence of Sea-mud Baths on the Metamorphosis. (*Vratch*, 1882, No. 31, p. 507.)

1846. DE GIAXA.—Cairine and Cairoline. (*Gazz. degli Ospitali*, Jan. 28 and 31, 1883.) MARAGLIANO.—The Biological Action of Cairine. (*Ibid.*, Oct. 14 and 17, 1883.) BIANCHI.—Therapeutic Applications of Chlorohydrate of Cairine. (*Lo Sperimentale*, September 1883. DE RENZI.—Studies in Clinical Medicine in 1882–3. (*Giorn. Internaz. delle Scienze Med.*, Fasc. viii., 1883.) QUEIROLO.—Cairine in Therapeutics. (*Imparziale*, August 20; *Italia Medica*, July 20, 1883.)

1847. GUAITA.—Resorcine and its Therapeutic Employment. (*Lo Sperimentale*, Fasc. i., 1883.) BASSI.—Resorcine in Intermittent Fevers. (*Ibid.*, Fasc. vii., 1883, and *Gazz. Med. Ital. Prov. Ven.*, An. xxvi. t. 2.) MASINI.—Resorcine in Diseases of the Ear. (*Lo Sperimentale*, Fasc. viii., 1883, and *L'Imparziale*, An. xxii.) MASSEI. Resorcine in Ozæna. (*Lo Sperimentale*, Fasc. x., 1883, and *Archives Ital. di Laring.*, 1883.)

1848. SILVA.—The Antipyretic action of Thymol. (*Riv. di Chim. Med. e Farm.*, April 1883.)

1849. MARAGLIANO.—Action of Salicylate of Soda on the Circulation. (*Ital. Med.*, n. 8, 9, 15, 17, 1883; *Riv. di Chim. Med. e Farm.*)

1850. LEECH.—Spiritus Etheris Nitrosi. (*Practitioner*, Oct. 1883.)

1851. YOUNG.—The Administration of Quinine. (*Ibid.*, Oct. 1883.)

1852. BERRY.—Marsh-mallow in Palmar Psoriasis. (*Ibid.*, Nov. 1883.)

1853. HERSCHELL.—The Action of Convallaria Majalis. (*Lancet*, Oct. 1883, p. 724.)

1854. DRUMMOND.—Convallaria Majalis. (*Brit. Med. Jour.*, Nov. 1883, p. 970.)

1855. SAWYER.—The Treatment of Several Forms of

Constipation and of Intestinal Obstruction. (*Brit. Med. Jour.*, Nov. 1883, p. 965.)

1856. COLE.—Valerianate of Zinc in Diabetes Insipidus. (*Lancet*, Nov. 1883, p. 771.)

1857. ROBERTSON.—Mercuric Chloride as a Surgical Dressing. (*Ibid.*, Nov. 1883, p. 872.)

1858. RAVEN.—Digitalis as a Cumulative Poison. (*Ibid.*, Nov. 1883, p. 1015.)

1859. BOZZOLO.—Action of Iodoform in Diabetes Mellitus. (*Archiv. Ital. de Biolog.*)

1860. WILSON.—The Treatment of Purulent Pleural Effusions. *Trans. of the Med. Soc. of Pennsylvania* Vol. xv., 1883.)

1861. WEBB.—The Treatment of Whooping-cough by Croton-Chloral. (*American Practitioner*, August 1883.)

1862. FÉRIS.—The Treatment of Dyspnœa in the Emphysematous by the Elastic Respirator. (*Bull. Gén. de Thérap.*, August 15.)

ART. 1832. *Bidder on Diet in Tuberculosis.*—In the *Berliner Klin. Wochensch*, No. 47, Dr. A. Bidder, of Berlin, concludes three articles on the relation between the alkalies of the food and the etiology of tuberculosis, by advocating a diet as free from potash salts as possible, but rich in common salt, as being a soda salt. He argues that the latter renders the tissues unfavourable to the development of the bacilli of tubercle, and that in young patients with tuberculous processes going on in the bones, joints, glands, lungs, &c., half a gramme to one gramme of common salt should be given three or four times daily with the food, according to age. If dislike to this be shown, benzoate of soda may be substituted in doses of 0·2 to 0·5 gramme (3 to 7·7 grains). Indeed, the latter salt (known to be useful in the summer diarrhœa of children) is highly relished; it is aromatic in taste, and increases the appetite. Bidder thinks, moreover, that the well-known injurious influence of iodide of potassium upon tuberculosis or scrofulous processes is probably due not to the iodine but the potash, which is replaced by soda in the stomach. The diet should contain an excess of albumen, of fat, and of salt in the cases mentioned. The article concludes by a reference to rickets, in which a connection with tuberculosis is attempted to be proved. Rickets is here said to be due to an excess of potash salts in the food as *one* cause of it. E. J. EDWARDES, M.D.

1833. *Satlow on the Treatment of Diphtheria with Oil of Turpentine.*—Dr. Satlow (*Jahrb. für Kinderheilk.*, Band xx., Heft 1), after employing all the usual methods of treatment with varying success, has, since March 1881, confined himself to turpentine. His experience with it extends to forty-three cases, including eight adults. Of these, only one died. This was a feeble boy, 5 years of age, who, after the local symptoms had disappeared, suddenly succumbed on the sixteenth day of the disease to paralysis of the heart. The following were the complications: in three cases, extension to the larynx; in three, to the nose; in one, persistent albuminuria; in six, transient albuminuria; in one, hæmaturia (in a delicate woman after one ounce of turpentine, and lasting two days); in four, paralysis of the palate. Transient strangury was common. Unless the case appeared grave from other reasons, the turpentine was withdrawn as soon as any renal complication showed itself, and recovery quickly followed without any œdema. The three cases of diphtheritic laryngitis recovered without tracheotomy. The author thinks it only fair to add that, in addition to this internal treatment, he prescribed, chiefly in deference to public opinion, cold compresses (with, when the temperature was very high, packing), and gargles of chlorate of potash or lime-water. The turpentine, which should be fresh distilled, was given to adults in doses of a tablespoonful twice daily. Children under 5 years received a teaspoonful, followed in both cases by a copious draught of milk. Where vomiting was produced, 5 to 15 minims of sulphuric ether were added. Small doses were found useless.

RALPH W. LEFTWICH, M.D.

1834. *Maragliano on the Therapeutic Properties of the Quebracho Bark.*—Quebracho is a bark that grows in the Argentine Republic, and is reputed to be remedial in asthma. The results of Dr. Maragliano's researches into the therapeutic properties of the bark, and its active principles, aspidospermine and quebrachine, are as follows (*Centralbl. für die Med. Wiss.*, Oct. 27). 1. The alcoholic extract decreases the frequency of the respiratory movements, but aspidospermine has the least action. 2. These substances exert their influence only upon functional derangements of respiration. 3. The frequency of the pulse may be reduced twenty beats by the action of this drug. 4. The action is pronounced in from thirty to forty minutes, and, if administered subcutaneously, in about five minutes. A medium dose is from 40 to 50 centigrammes of the alcoholic extract. For subcutaneous injection, 5 centigrammes of the sulphate of quebrachine or aspidospermine. No signs of its intolerance have been observed. W. B. KESTEVEN, M.D.

1835. *Leviez on the Treatment of Fœtid Bronchitis by Hyposulphite of Soda.*—Dr. Leviez has collected in his dissertation (*Jour. de Méd. Prat.*, Oct. 1883, p. 472) a considerable number of observations upon this subject, and confirms the favourable opinion of M. Lancereaux, who cured seventeen of his patients by this remedy. Four or five grammes of the salt must be given daily during five or six weeks. The good effect is generally visible after about a week.

J. S. KAESER, M.D.

1836. *Pick on Creasote in Diseases of Air-passages.* Dr. Pick, of Coblenz, says (*Deutsche Med. Wochensch.*, 1883, No. 13), that the action of creasote in consumption, recently much extolled by the French (Bouchart and Gimbert), as well as the successful experiments of Fräntzel and Curschmann, induced him to employ this much discredited remedy in a series of cases, and to make a summary of the results. Creasote was given by the author both internally and externally. For external use he employed a mask which, being a modification of Hausmann's apparatus, could be worn by the patients without much difficulty, and even during the night. The creasote was dropped on the cotton-wool in the mouthpiece, and was inhaled by means of deep inspiration. The apparatus has the advantage over Hausmann's that the nose remains free, and the troublesome irritation of the nasal mucous membrane is avoided. Dr. Pick gave the creasote internally either with cod-liver oil, or according to the French formula: Kreasoti 13·00, tinct. gent. 30·00, spirit. vini rectif. ad 250, vini Malag. ad 1,000. The drug was well borne by the patients both internally and in the form of inhalation, and Dr. Pick speaks of one case where there was a decided antipathy to cod-liver oil, but where it was taken quite well in the above-mentioned combination. Gastric disturbances or toxic effects were seldom perceived. Among the cases treated

by the author was one of croupous pneumonia passing into gangrene, thirteen of tuberculous infiltration in persons with hereditary taint, and one of sudden hæmoptysis after long-standing catarrh of the lung. The results were very good in all sixteen cases ; after a short use of the drug, diminution of the cough, considerable reduction of temperature, improvement of the general health, and decrease in the expectoration quickly ensued ; and the hæmoptysis mentioned above, which had not yielded to a fourteen days' treatment with ergotin, was speedily checked by a few hours' inhalation of creasote. This may perhaps be attributed to the styptic action of the creasote, which, besides its disinfecting and antipyretic properties, coagulates albumen and contracts the capillaries. A lasting effect was, however, observed to follow the employment of creasote only in catarrh of the apex, or in commencing infiltration. In advanced phthisis, where extensive disintegration of tissue with great diminution of strength was already present, the only lasting result was the alleviation of isolated symptoms. Dr. Pick lays particular stress on the quality of the creasote, and attributes its actions only to that got from beech-wood tar, in contradistinction to the kind more frequent in commerce, obtained from coal-tar, whose qualities, so far from being useful, only set up gastric disturbance.

1837. *Michael on Hypodermic Injection of Solution of Common Salt in Cholera.*—Dr. Michael, of Hamburg, writes to the *Deutsche Med. Wochensch.* of September 26, to recommend the injection of several litres of a 8·75 per cent. solution of chloride of soda into the subcutaneous cellular tissue in cholera. He considers that the sudden introduction of a large quantity of fluid into the circulation, as is done in transfusion, may have a paralysing effect upon the weakened cardiac muscle, which would be avoided by the subcutaneous method. He has tried the experiment on a dog, and has found that the fluid becomes rapidly absorbed, no evil effects whatever following the injection. His method is the same as that recently advocated by Dr. Samuel of Königsberg, except in two points which Dr. Michael considers of great importance. The first is the employment of massage during the injection, for the purpose of dispersing the fluid among the tissues, and the second is the choice of the part to be punctured. Dr. Samuel recommends the neck, but Michael shows that the fluid might gravitate downwards, and cause œdema of the glottis in the recumbent posture, and of the mediastinum in a sitting position. He therefore recommends the inner aspect of the thigh, or the abdomen. The practical benefit of this treatment in cholera has yet to be tested clinically. Dr. Michael suggests its use also in acute anæmia after hæmorrhage of any kind, its advantages being the diminished danger as compared with venous or arterial transfusion, the much greater quantity of fluid that can be introduced, and the possibility, when necessary, of performing the operation without assistance.

1838. *Kirnberger on Inhalations of Oxygen in Leukæmia and Pseudo-leukæmia.*—The *Deutsche Med. Wochensch.* of Oct. 10 contains the substance of a lecture given by Dr. Kirnberger in the Medical Society at Mayence on the treatment of leukæmia and pseudo-leukæmia, in which he suggests the inhalation of oxygen as a means of obviating the retarded tissue-metamorphosis which is characteristic of this disease. He cites a case in which he employed this treatment with good results. The patient, a boy aged 10½, who had been treated with iron, arsenic, and quinine without any benefit, improving greatly, and finally becoming cured after the inhalation of oxygen, combined with arsenic internally. The boy had reached a condition of extreme weakness, being entirely confined to bed, with loss of appetite and tendency to vomiting ; the spleen considerably enlarged, and the white and red blood-corpuscles in the proportion of 1 to 90. The treatment began in December 1882, and after a daily inhalation of about 30 litres the boy could leave his bed in ten days, and could go to school about the end of February. Some variations in his condition occurred from time to time ; but about the middle of September the author considered him to be definitely cured, the number of red corpuscles having returned to the normal.

1839. *Bozzolo on Lukewarm Baths in Pneumonia and Enteric Fever.*—A paper by Dr. Bozzolo on the employment of lukewarm baths in pneumonia and enteric fever is reported in the *Centralbl. für Therapie* of Aug. 1883. Out of 64 cases of pneumonia, 27 were treated with baths and 34 without. Of the 27 only one died, while 6 of the 34 cases proved fatal. The average stay in hospital of the bath cases was 19 days, of the others 26. A fall in the temperature was seldom observed after a bath of one hour's duration, but after two or three hours the fall was marked, and was more decided the longer the bath, 5 hours being the longest. The temperature remained low longer after the lukewarm bath than after a cold one, but the feeling of well-being which succeeds the cold bath does not come on so quickly after the warm. In enteric fever lukewarm baths are not so useful as cool or cold baths, which influence rapidly the stupor, delirium, and other similar symptoms.

1840. *Hein on the Treatment of Trichinosis.*—Dr. Isidor Hein (*Communications of the Wiener Med. Doctorencollegium*, 1883, No. 4) says that, several hours after the ingestion of meat containing trichinæ, it is still possible to prevent a general infection of the organism by washing out the stomach and employing purgatives. Later, when the sexually mature trichinæ are present in the intestine, the attempt has to be made to destroy and remove them, in order to prevent the immigration of new generations of embryos. From a theoretical point of view, laxatives seem to be suitable for this purpose, but experiments and experience have taught that purgatives are not capable of removing trichinæ from the digestive canal, or of retarding the development and the invasion of the embryos. The destruction of the trichinæ by vermifuges is no more successful, and the treatment of trichinosis becomes more a symptomatic one. The course of treatment is commenced by a purgative, even if some weeks have elapsed since infection ; as trichinæ, retarded in their development, may still be present in the intestine. Ruprecht recommends a dose of calomel. For the muscular pain, cold water, which also checks the debilitating perspiration, and inunction with chloroform, oleaginous, and spirituous fluids, may be tried one after the other. In the case under Dr. Hein's observation the application of an ice-bladder mitigated the pain ; in other cases, long-continued warm baths and the enveloping of the extremities in flannel bandages were well borne. If sleeplessness be present, narcotics are indicated, preference being given to those which do not constipate. Expectorants are to be used in severe attacks of dyspnœa ; Kratz recommends benzoated tincture of opium

(paregoric) in a dose of from 30 to 60 drops. Salicylic acid is much to be recommended in the treatment of the fever, having at the same time an anthelmintic action, as the author has observed in patients with tænia, who have been ordered salicylic acid for rheumatism. It remains to be seen, however, whether it has an anthelmintic influence on trichinæ also. During the whole course of the illness the endeavour must be to sustain the strength of the patient, whose diet must be nourishing and easily digested. ALICE KER, M.D.

1841. *Popoff on the Treatment of Toothache by Subcutaneous Injection of Pilocarpine.*—In the *Vracheb. Vedom.*, 1882, No. 543, p. 3551, Dr. P. M. Popoff emphatically recommends hypodermic injection of a solution of pilocarpine (half a grain to two scruples of water) as a most reliable remedy for toothache. He injected ten minims into the temporal region of the diseased side, and saw almost instantaneous relief, which was complete and permanent.

1842. *Goluboff on the Action of Kairin on the Febrile and Healthy.*—In the *Meditz. Obozr.*, March 1883, p. 481, Dr. N. F. Goluboff, of Professor M. P. Tcherinoff's clinic in Moscow, records his observations on a patient suffering from croupous pneumonia, and on two healthy students, to whom he administered kairin in doses of fourteen and seven grains. From these few observations, the author draws the following conclusions concerning doses of kairin under one gramme. 1. Kairin gives rise to rather severe pain in the epigastrium and in the whole belly. 2. In febrile patients it very considerably lowers the temperature, which then rises again, sometimes even higher than before the kairin administration. During the first day of the administration, after the patient had taken 35 grains of kairin in four doses, the temperature—which at 10 A.M. was 39°·8 C. (103°·6 F.)—fell to 36°·8 C. (98°·25 F.) at 11 P.M. During the second day it was 39°·4 C. (102°·9 F.) at 2 P.M.; it fell slightly after each of three 7-grain doses, but very shortly afterwards went up to 40°·8 and 40°·9 C. (105°·4 and 105°·6 F.). 3. In non-febrile subjects, kairin does not act on the temperature, even when taken in fourteen-grain doses. 4. Kairin seems to irritate the kidneys (increase of the quantity of urine, increase of mucus and epithelial cells, appearance of epithelial casts). 5. Kairin did not produce any influence on the course of pneumonia (all the phenomena of the latter developed themselves as usual, resolution was prolonged). [Kairin is an alkaloid, which has been prepared synthetically by Professor Fischer, of Munich. Its formula is C_{10} H_{13} NO. It is hydrated chinolin, in which one atom of nitrogen is combined with carbon of methyl-group: hence, this compound bears also the rather jaw-breaking name of 'oxychinolinmethylhydrid.' The first investigations into the physiological and therapeutic action of kairin, as well as of other chinolin products, cairolin and chinolinmethylhydrid, were made by Professor Filehne, of Erlangen, in Professor Leube's clinic, and published by him in the *Berliner Klin. Wochensch.*, No. 45, 1882, and No. 6, 1883.—*Rep.*]

1843. *Enko on the Action of Cinchonin.*—Dr. P. Enko (*Meditz. Obozr.*, March 1883) fully confirms, by his own experience, the observations recently published by Dr. Laborde (*Comptes Rendus de la Société de Biologie*, 1882, Nos. 41 and 42) on the harmful effects of cinchonin on the heart. Cinchonin acts on the heart more powerfully than quinine: in small doses, from a quarter to half a grain, three times a day; it increases the strength of the cardiac beats, as about two-grain doses of quinine do. In weak patients, doses of one or two grains of cinchonin often produce weakness of the action of the heart, giddiness, and nausea. Four-grain doses, given even to fairly strong patients, not unfrequently cause fainting, with subsequent general weakness, giddiness, and tremor of the limbs, the phenomena sometimes lasting twenty-four hours or longer. On giving large doses (from 8 to 12 grains) at bed-time to very strong men (peasants) with intermittent fever, the author often saw vomiting the next morning. As an antimalarial remedy, cinchonin seems to stand on a level with quinine. As a tonic, it was used by the author daily, but he never administered it to patients suffering from enteric fever or pneumonia. He recommends caution in the dose, which should be from a quarter to half a grain, three times a day, in patients confined to bed; and not more than one grain, twice a day, to those able to move about. Dr. Enko is inclined to ascribe many cases of collapse, sometimes occurring after the administration of five or six grains of quinine, to the druggist having dispensed cinchonin instead of quinine.

1844. *Trusewicz on Glonoin in Angina Pectoris.*—In the *Ejened. Klin. Gazeta*, Sept. 11 and 18, 1883, in an introductory note. Dr. J. J. Trusewicz states that the perusal of Dr. W. Murrell's work on nitroglycerine as a remedy for angina pectoris induced him to undertake physiological as well as clinical observations on the action of this powerful drug. In the present paper, the author details two severe cases of angina pectoris (in female patients aged 66 and 32, suffering from cardiac disease) where he used Field's solution, always beginning with doses of one drop four times a day. In one of the cases, the patient took for a while as much as seven drops at a time. The results of the administration, as far as cutting short and prevention of the attacks were concerned, proved so extremely satisfactory, that Dr. Trusewicz expresses his strong belief in 'glonoin' being, of all other drugs known, the most effective and reliable arrester and preventer of the paroxysms, even in the cases of complicated angina pectoris. [The writer is the first Russian physician who has published his own observations on Dr. Murrell's plan of treatment of angina pectoris. As we see, Dr. Trusewicz's experience fully confirms the beneficial results obtained by Dr. Murrell himself (see the LONDON MEDICAL RECORD, Nov. 1882, p. 478); Mayo Robson (*ibid.* May 1880, p. 187); McCall Anderson (*ibid.* Oct. 1881, p. 409); W. E. Green (*ibid.* April 1882, p. 135); Korczynski (*ibid.*, March 1883, p. 87), and others. An excellent paper on nitroglycerine may be found in the *Brit. Med. Jour.*, March 13, 1883, p. 406; and March 27, p. 487.—*Rep.*]

1845. *Voronin on the Influence of Sea-mud Baths on Metamorphosis.*—Dr. V. M. Voronin, of Odessa (*Vratch*, 1882, No. 31), furnishes some interesting data based on the observations which had been carried out by him on himself. He used baths made of sea-mud from the Odessa limans. During thirty-four days eight baths were taken. The duration of a bath was thirty minutes, the temperature in one series 32° R. (104° F.), in another 28° R. (95° F.). The results of the analyses of urine are these. A. *Baths at 32° R.*—1. The amount of nitrogen fell under the normal in the first days of bathing, and increased subsequently. 2. The amount

of sulphuric acid decreased in bath days and returned to the standard in the next days. 3. The amount of phosphoric acid fell in bath days. 4. The loss in weight (through perspiration) after each bath was in average 800 grammes. 5. The daily quantity of urine in bath days fell from 2530–1925 cc. to 1960–1275. B. *Baths at* 28° *R.*—1. The amount of nitrogen increased in the day of first bath, and kept about maximal normal figures in the subsequent days. 2. The daily amount of urine fell from 2355 cc. to 2010 and 1725. 3. The quantity of phosphoric acid in bath days decreased very slightly. Dr. Voronin adds that baths at 32° R., taken at bed time, produced an excited state (sleep came later than usually, and was interrupted).

V. IDELSON, M.D.

1846. *De Giaxa, Maragliano, Bianchi, De Renzi, and Queirolo on Kairine.*—Kairine, produced synthetically by Fischer, of Monaco, and introduced into medicine by Filehne a little more than a year ago, has been the subject of a good deal of experiment in Germany and in Italy. It is a febrifuge ; and is intended to replace quinine. There is some discrepancy as to its value in therapeutics. Some observers think it has a more powerful antifebrile action than quinine, and that it is devoid of the unpleasant effects that follow the use of that drug in large doses. Others, though by no means placing it on a level with quinine, consider it a valuable addition to the materia medica. The general facts that appear to be established in regard to its action are these. The pulse is somewhat diminished in frequency by five to twenty beats, according to various circumstances. The blood-pressure, measured by Basch's sphygmomanometer, is found either to remain unaltered, or to increase slightly. According to most observers, respiration is altogether unaffected ; some, however, have noticed diminished frequency. Perspiration occurs only when there is fever ; and then it is in proportion to the lowering of the temperature. Rarely great depression has been observed, accompanied by spasm of the facial muscles. Usually there is increase of motor, sensory, and psychical activity ; and muscular power is steadily augmented. A sensation of burning in the nose and throat, and lachrymation, are apt to occur. Occasionally there are gastric disturbances, such as nausea and vomiting. Depression of temperature and cyanosis took place when the drug was given in febrile conditions ; the cyanosis being in proportion to the fall of temperature, and, contrary to what Filehne supposed, not to the amount of the medicine administered. In healthy persons the temperature was unaltered, and there was no cyanosis. Elimination takes place by the kidneys. The urine acquires a green or brownish-green colour, and becomes strongly acid. The salts and urea, and the quantity of water excreted, remain unchanged. Although kairine is looked on as an antiseptic, some observers (Ludwig and Filehne) have found the urine of those taking it to swarm with bacteria. Touching the dose, from a quarter of a gramme to one gramme may be given every three hours. Kairoline has the same physiological and therapeutical effects ; but is slower in action and in elimination than cairine.

1847. *Guaita, Bassi, Masini, and Massei on Resorcine.*—This drug has been used internally as a febrifuge ; externally as an antiseptic. Dr. Bassi made twenty observations with it in intermittent fevers. Its action in arresting the febrile movement was highly satisfactory. The dose was from two to six or eight grammes. Its small commercial value is likely to make it a rival of quinine. The other authors deal only with its external use, and are unanimous in their opinions thereon. It is an antiseptic and mild astringent. The strength of the solution is ½ to 5 per cent. ; in pomade, for parasitic affections, 10 per cent. A 1 per cent. solution prevents fermentation ; 1·5 (1½) per cent. prevents putrefaction. It is devoid of unpleasant smell and of irritating qualities. In experiments on its physiological properties poisonous symptoms did not appear until over sixty centigrammes for each kilogramme had been given.

1848. *Silva on Thymol.*—Silva tried thymol in fifteen cases (seven typhoid, seven pneumonia, one pleurisy). Given in doses of three to four grammes it causes a somewhat persistent diminution of heat. Dr. Silva has never seen, except quite exceptionally, even when the medicine was administered in much larger doses, any of the ill effects that Balz observed in 1877 ; namely, intense sweating, deafness, and weight in the head.

1849. *Maragliano on Salicylate of Soda.*—The author found that the frequency of the pulse was generally somewhat diminished ; occasionally the diminution was considerable. The blood-pressure was never lowered ; frequently it was raised. The effects began in one or two hours after the administration of the drug, and lasted three or four hours.

WILLIAM R. HUGGARD, M.D.

1850. *Leech on Spiritus Ætheris Nitrosi.*—Dr. D. J. Leech, in the *Practitioner*, Oct. 1883, communicates an able article on the therapeutics of spirit of nitrous ether. In ordinary doses it is a distinct depressor of arterial tension, and the influence of the drug upon the circulation, in moderate doses, is of considerable duration. Several tracings are given showing the effect of doses of one hundred, fifty, and twenty minims on the pulse of a man aged 30. Sometimes a full dose of the drug causes a slight feeling of faintness and depression, and there may be slight throbbing in the head and giddiness. Its action is analogous to that of nitrite of amyl, and it probably influences the same tissues. It is for its diuretic and diaphoretic properties that it has been chiefly used ; but it is also useful as a grateful stimulus in restless irritable conditions, as a cardiac stimulus, as well as in children suffering from fever with nervous symptoms, and as a febrifuge.

1851. *Young on the Administration of Quinine.*—Dr. David Young, in the *Practitioner*, Oct. 1883, communicates some notes on the administration of quinine in Rome. Much harm is unconsciously done by many physicians by ordering patients to commence taking quinine immediately they cross the Italian frontier, so that many cases of cinchonism are met with. Again, few visitors in Rome are affected by intermittent fever, but rather with fevers of the remittent and typhoid type ; and it is in these cases that the hasty administration of quinine does harm. In remittent fever, quinine seems to have a much shorter period during which it is capable of displaying its therapeutic power. Notes on two cases of patients to whom large doses of quinine were given with most distressing results are recorded ; and attention is drawn to the necessity of testing each individual's capability of taking the drug. The conclusions arrived at are as follows. 1. Quinine should never be given in antipyretic doses, in cases where the bowels are confined and the urine is scanty. 2. In cases where it

is being administered, and an increase of dose is desirable, this may be safely done if the skin, bowels, and kidneys maintain their normal functional activity. 3. In many cases of remittent and intermittent fever, the combination of the drug with chloride of ammonium, or a salt of potash or soda, is likely to be more easily tolerated, as well as more useful, than if it be administered in a pure form. 4. During the administration of quinine, should headache come on or increase in intensity, the case requires the most careful attention.

1852. *Berry on Marsh-Mallow in Palmar Psoriasis.*—Dr. Berry, in the *Practitioner*, Nov. 1883, contributes a short article on the use of the marsh-mallow in a case of palmar psoriasis, occurring in an old man, aged 65. Dr. Berry tried three-minim doses of Fowler's solution three times a day, ordering the patient to wash his hand well with soft soap night and morning, and then to apply an ointment composed of vaseline and chrysophanic acid. Then oil of cade and vaseline were tried, and subsequently ammoniated mercury ointment, and Wright's liquor carbonis detergens as a lotion. None of these measures were successful. An old woman in the village said she could cure the case by marsh-mallow ointment; Dr. Berry allowed his patient to try it, and in a month the skin of the hand had almost regained its natural appearance. The althæa officinalis, or marsh-mallow, belongs to the natural order Malvaceæ. The ointment can be made by cutting fresh leaves into small pieces, stirring them together with lard, and boiling the mixture for half an hour, after which process it is strained and is ready for use.

1853. *Herschell on the Action of Convallaria Majalis.*—Dr. G. Herschell, in the *Lancet*, Oct. 1883, p. 724, reports a case of a middle-aged man, whose irregular pulse gave no inconvenience beyond the fear that he was the victim of heart-disease. It was impossible to make out the heart-sounds; a sphygmographic tracing was therefore made, which showed that there were three or four regular beats followed by three or four abortive ones. At this time the patient was taking digitalis, which was ordered to be discontinued, and after an interval of two months he was to be seen again. About three months later, the patient presented himself; the pulse was still very irregular, and smaller than during the administration of digitalis. Dr. Herschell now ordered 5 minims of tincture of convallaria three times a day, but was obliged to discontinue it after a few doses, on account of the following remarkable effects. Almost directly after each dose, the pulse became nearly imperceptible at the wrist, and the patient suffered from a sense of oppression over the sternum, nausea, cold feet, vertigo, flatulence, and a feeling of utter prostration. These symptoms lasted two hours and then subsided, only to reappear directly the next dose was taken. The convallaria was discontinued, and the patient was ordered digitalis again; the result being a remarkable improvement in the pulse. The case is reported, as convallaria has lately been receiving much attention, and is believed to be without dangerous properties.

1854. *Drummond on Convallaria Majalis.*—Dr. E. Drummond, in the *Brit. Med. Jour.*, Nov. 1883, p. 970, contributes an historical note on convallaria majalis. In an old Italian book of *Commentaries on the Materia Medica of Discorides*, by Dr. Pietro Andrea Matthioli, published in Venice in 1621, the use of this drug as a means to strengthen the heart, brain, and spiritual parts, is mentioned; also that it was given in palpitation, vertigo, epilepsy, and apoplexy; also as a remedy for the bites and stings of poisonous animals, to quicken parturition, and for inflammation of the eyes.

1855. *Sawyer on the Treatment of Severe Forms of Constipation and of Intestinal Obstruction.*—Dr. Sawyer, in the *Brit. Med. Jour.*, Nov. 1883, p. 965, refers to the treatment of the severer forms of constipation and of intestinal obstruction. Constipation concerns the large intestine only; intestinal obstruction the whole of the intestines, small as well as large. For cases of habitual constipation the author's favourite remedy is Socotrine aloes, placing little faith in nux vomica and belladonna. It is given in a pill of one, two, or three grains of aloes, combined with a quarter of a grain of sulphate of iron, and one grain of extract of hyoscyamus, at bedtime every night. Another drug which has also found great favour with the author, is the American cascara sagrada. Fifteen to thirty minims of the liquor, thrice daily, will produce one or two dejections in the twenty-four hours. With regard to cases of acute intestinal obstruction, the author comes to the following conclusions. 'If the case be one of acute intestinal closure affecting the smaller bowel, other than a case of external hernia, I should allow fair opportunity for relief by such remedies as opium, enemata, time, and belladonna, but should not wait until the patient was *in extremis* before urging surgical interference.' If the patient consented to the operation, the author prefers laparotomy—*i.e.* abdominal section, with a view of finding and effectually relieving the obstruction, provided the seat of obstruction be near at hand, and the operation can be performed without much searching amongst the intestinal coils. But rather than subject the patient to risks of leaving the bowel to disentangle itself, the operation of laparo-ileotomy is preferred. Laparo-ileotomy is abdominal section, with theformation of an artificial anus in the ileum.

1856. *Cole on Valerianate of Zinc in Diabetes Insipidus.*—Dr. Cole, in the *Lancet*, Nov. 1883, p. 771, records the notes of a case of diabetes insipidus in a lady, aged 30, single, of delicate constitution, who had been ailing for nearly two years. The author commenced treatment with ergot, in gradually increasing doses of the liquid extract, until half an ounce every four hours was reached. This amount was maintained for more than a week, without the least effect on the disorder. Next, valerianate of zinc was given in doses of 5 grains every six hours, and after a fortnight the patient was completely cured.

1857. *Robertson on Mercuric Chloride as a Surgical Dressing.*—Mr. W. Robertson, in the *Brit. Med. Jour.*, November 1883, p. 872, suggests the use of a solution of mercuric chloride of strength of one-sixteenth of a grain with 8 ounces of water, as an antiseptic dressing. A case is noted of a boy who sustained an injury to the elbow-joint, and, notwithstanding the use of carbolic dressings, suffered from much suppuration and fever. About four weeks after the accident the dressings were changed for one in which a solution of the mercuric chloride was applied to the wound; the suppuration soon became less, the temperature came down, and the patient rapidly improved. Other cases are referred to in which the action of this salt proved most beneficial.

1858. *Raven on Digitalis as a Cumulative Poison.* Dr. Raven, in the *Brit. Med. Jour.*, November 1883, p. 1015, gives an example of the accumulative action of digitalis. A woman, aged 67, was suffering from anasarca, consequent upon dilatation of the left ventricle. On October 8, a mixture containing 15 minims of tincture of digitalis was ordered every four hours. The drug acted at first as a diuretic and rapidly reduced the anasarca. After five days' administration, the drug was not well tolerated, and effervescing salines were substituted. By October 17 the pulse was becoming steadier and slower, and on October 21 it was beating regularly at 44 per minute. On October 23, ten days after the use of digitalis had been discontinued, the pulse was 40, and after this it gradually began to quicken.

RICHARD NEALE, M.D.

1859. *Bozzolo on the Action of Iodoform in Diabetes Mellitus.*—Professor Bozzolo (*Archiv. Ital. de Biolog.*), after satisfying himself of the beneficial effects of iodoform in several cases of diabetes mellitus, caused a series of laboratory investigations to be conducted by his laboratory student, M. Balp, to determine the influence of iodoform upon the number of red corpuscles, the quantity of hæmoglobin, and the arterial tension. These observations were conducted with great care, and by the use of the most approved physiological apparatus. In two cases of diabetes he found that iodoform in large doses—that is, one to two grammes—diminished the elimination of sugar and the quantity of urine; that it diminished the number of red corpuscles and of hæmoglobin, and that it diminished the arterial tension. To explain the diminution of red corpuscles, he cites the theory of Binz, that the iodoform, through the iodine which disengages itself, as in iodate of sodium, destroys the red corpuscles, and produces partial coagulations. If this be the fact, the diminution must be progressive, and patients using iodoform would become rapidly anæmic, which anæmia has not been observed so far in cases under this treatment. The diminution of arterial tension would explain the effect of the drug in reducing the quantity of urine, in eliminating glucose, and on the quantity of corpuscles and of hæmoglobin; and Professor Bozzolo inclines to the view that the iodoform exerts its influence on the centres, and especially upon the vaso-motor centres.

1860. *Wilson on the Treatment of Purulent Pleural Effusion.*—Dr. Wilson's treatment of purulent pleurisy (*Trans. of the Med. Soc. of Pennsylvania*, Vol. xv., 1883) is based upon the principle that the cavity containing pus is to be emptied, and then obliterated by reparative inflammation. For this purpose it is deemed essential that the opening when made into the chest be kept open, drained by a retained tube, and washed out daily. The puncture is to be made by means of short trocars (not exceeding in length two inches), the cannula being retained only until the pus ceases to flow, when a soft rubber catheter (Nélaton's or Jacques') is slipped into position through the metal cannula, which is then withdrawn. Catheters are preferable to sections of drainage-tube, by reason of the ease with which they can be introduced into the sinus by means of a probe. It is occasionally necessary to change the catheter, or to remove it to clean it. The catheter is retained throughout the treatment by means of silk threads run through its substance, and confined to the chest by means of strips of plaster. The washing of the cavity by means of a ball-syringe and a system of soft rubber tubing, the connections being made by sections of tapering glass tubes. This operation is to be repeated once a day. The temperature of the water should be from 102° to 105° F., and the amount of force used very slight indeed. At the first sitting, no more should be injected each time than one-fourth of the volume of the pus withdrawn. This injection is to be repeated at each sitting, until the water returns only slightly turbid or clear. After having used for this purpose many of the disinfectants in vogue, Dr. Wilson settled upon the mercuric bichloride as the most efficient and convenient. At first he uses 1 part to 15,000, then 1 to 8,000, and finally 1 to 5,000. In the intervals of the dressings, the patient wears a large pad of oakum to absorb the discharge. As the cavity contracts and the discharge diminishes, the intervals between the washings may be much prolonged; when the discharge becomes serous and does not exceed two fluid-drachms, the tube should be withdrawn and the sinus permitted to heal. If a spontaneous opening have formed in the chest-wall, this plan of treatment is not thereby modified. Such sinuses are badly located, oblique, tortuous, and always ineligible for operative purposes. In such cases it is necessary to proceed as if no spontaneous opening existed. After the operations, such openings speedily heal. Bronchial fistulæ are equally without influence in modifying the treatment.

1861. *Webb on the Treatment of Whooping-Cough by Croton-Chloral.*—Dr. W. C. Webb, of Bryantsville, Kentucky (*American Practitioner*, Aug. 1883), has come to the conclusion, from the treatment of nearly 200 cases of whooping-cough, that croton-chloral is by far the most valuable single remedy for its relief. He has found that it is well borne by children. To influence the disease, it must be given in decided doses. A child twelve months old will bear one grain of croton-chloral every four hours throughout the twenty-four. During the first week, not less than this should be given. After this, the cough is usually so much relieved that few, if any, doses are required at night. If the drug be pushed thus to its full effect, there are few cases that may not be entirely controlled in a fortnight. The dose for children ten years old should be two grains every four hours; adults will bear only about four-grain doses. The drug thus used does not derange digestion or affect the vital nervous centres. The first few doses may cause some irritation about the throat and fauces, but this soon ceases. The relief is so marked in some cases that patients fall asleep in their chairs. Croton-chloral, if pulverised, will dissolve readily in compound tincture of cardamoms. The following is a good prescription:—℞. Croton-chloral, ʒ i; tinct. cardam. comp., glycerin., āā ʒ ij.. One half teaspoonful every four hours, for a child two years old and under. A less expensive and very useful mixture is as follows:—℞. Croton-chloral, ʒ i; tinct. belladonnæ, ʒ ij; tinct. cardam. comp., ℥ ij; glycerin., ʒ iij. Dose, one half teaspoonfull. If the paroxysms of cough be exceedingly severe, and if there is extreme gastric irritability, the croton-chloral should be preceded by a few whiffs of chloroform. The anæsthetic thus used produces the happiest effects, and it need not be repeated more than two or three times. The combination of the bromides with the croton-chloral is of doubtful utility. If any of them are to be used, the bromide of quinine should be preferred. Watchfulness should, of course, be exer-

cised during the use of croton-chloral, lest toxic symptoms should be manifested.

1862. *Féris on the Treatment of Dyspnœa in the Emphysematous by the Elastic Respirator.*—Dr. Bazile Féris (*Bull. Gén. de Thérap.*, Aug. 15), considering that dyspnœa in emphysema is produced by loss of elasticity of the alveolar walls, the lungs being hence kept in the position of inspiration, has designed an apparatus to facilitate expiration, and thus restore to the lung its lost elasticity and abolish the dyspnœa. The apparatus designed is extremely simple, and can be easily worn. It resembles exactly a double hernia-truss: from a pad situated between the shoulders, the two limbs of the truss pass round under the arm-pits to the terminal pads in front, which are rather larger and thinner than those of a hernia-truss. Light straps passing over the shoulders keep the pads in position. The parts at which these pads should be made to exercise pressure are the least resistant parts of the thoracic wall, usually the upper and anterior part of the chest, over the cartilages and the ends of the ribs. The first effect of the pressure is to drive the air out from the chest, thus aiding expiration; inspiration follows naturally, the inspiratory muscles being increased in volume. Tracings show increased movement of the chest when the apparatus is worn. The cases in which M. Féris has tried his respirators have been relieved of their dyspnœa in a remarkable manner; the benefits conferred can be confirmed by experiments with the spirometer, the volume of air respired being found to be nearly double that breathed without the apparatus.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1863. WEINLECHNER.—Removal of a Fibro-cystic Tumour of the Abdominal Wall simulating Ovarian Disease. (*Wiener Med. Blätter*, Vol. i., 1883.)

1864. WEINLECHNER.—Ovariotomy: Ligature of the Pedicle with Catgut: Sloughing of the Distal End of the Pedicle, discharged through the Abdominal Wound: Recovery. (*Wien. Med. Chir. Centralbl.*, Nov. 2, 1883.)

1865. HAECKEL.—Affections of the Pleura in Diseases of the Female Organs. (Inaugural Dissertation: abstract in *Deutsche Medizinal Zeitung*, Nov. 8, 1883.)

1866. SCHRÖDER.—On Fibroma of the Uterus. (*Charité Annalen*, 1881.)

1867. BÖHM.—On Disease of Gaertner's Ducts. (*Arch. für Gynäkologie*, Vol. xxi., Part I.)

1868. PINCUS.—Dermoid Cyst of the Left Ovary, Perforation of the Bladder: Operation: Recovery. (*Deutsche Zeitschrift für Chir.*, xix. 1, 1883, and *Deutsche Med. Zeitung*, Nov. 29, 1883.)

1869. PALADINI, R.—Transfusion of Blood by Hypodermic Injection. (*Gazz. Med. Ital. Lombardia*, Aug. 25, 1883.)

1870. TRUZZI E.—New Researches on the Advantages of the Application of the Forceps in Breech-presentations. (*Gazz. Med. Ital. Lombardia*, Aug. 4-18, 1883.)

1871. KOLAGO, S.—A Contribution to the Morbid Anatomy of the Ovaries. (*St. Petersburg Inaugural Dissertation*, 1882, p. 36.)

1872. SOLOVIOFF, A. N.—On Ovariotomy. (*Meditz. Obozr.*, June 1882, p. 891.) RODZEWICZ, H. J.—On the Statistics of Ovariotomy. (*Vracheb. Vedom*, 1882, No. 536, p. 3433.)

1873. APOSTOLI.—Treatment of Ovarian Pain by Electricity. (*Revue de Thérap.*, Sept., p. 224.)

1874. PRIDEAUX.—Cystic Polypus of the Rectum complicating Parturition. (*Lancet*, Oct., p. 633.)

1875. HOFMEIER.—The Influence of Diabetes Mellitus on the Female Sexual Organs. (*Berliner Klin. Wochensch.*, Oct. 15.)

1876. TAYLOR.—Cancer of the Uterus in a Virgin. (*Amer. Jour. of Obst.*)

1877. RUSCONI.—Sterility and Conception. (*Gazz. degli Ospitali*, Oct. 24, 1883.)

1878. TORINO.—Vomiting of Pregnancy. (*Anal. dei Circulo Med. Argent.*, June 1883.)

ART. 1863. *Weinlechner on a Case of Fibro-cystic Tumour of the Abdominal Wall, diagnosed as Ovarian Disease.*—Seven years before operation, a woman, aged 34, observed a swelling of the size of a hen's egg, in the left hypochondrium, immediately under the ribs. It grew rapidly and became inconvenient, through its weight. When examined in hospital, after seven years' growth, the tumour extended from the left hypochondrium to the left groin and crest of the ilium, and in the middle line it reached from three fingers' breadth below the ensiform cartilage to the symphysis pubis. On the right side, the tumour did not extend so far towards the lumbar region, nor did it touch the lower borders of the ribs. Its surface was irregular, and no fluctuation could be detected on pressure. It appeared to be freely movable. No tumour could be felt in the pelvic cavity, and the uterus was freely movable. The operator, not trusting apparently to the early history of a swelling felt in the left hypochondrium, believed the tumour to be a solid ovarian sarcoma, closely adherent to the anterior abdominal wall, but separated from the uterus by a long pedicle. The operation, which was exceedingly difficult, showed that the tumour was a fibro-cystic growth, eighteen pounds in weight, situated entirely in the abdominal wall

1864. *Weinlechner on a Case of Sloughing of the Pedicle after Ovariotomy: Recovery of the Patient.*—In removing a large multilocular ovarian cyst from a woman, aged 23, Dr. Weinlechner found that the pedicle was long enough to be secured by a Spencer Wells' clamp. The operation was performed under thymol-spray; the only adhesions were omental and very recent, but a drainage-tube was passed into Douglas's pouch. The operator observed, whilst sponging out the abdominal cavity, that, owing to the arrangement of the peritoneum, the intestines lay in dangerous proximity to the clamp and the under surface of the abdominal wound. Dr. Weinlechner therefore transfixed the pedicle below the clamp with two double catgut ligatures, and then put the pedicle back into the abdominal cavity. The patient's abdomen was then bandaged with carbolised gauze. The progress of the case during the first day after operation was very satisfactory. From the first, the patient could empty her own bladder. On the second day the bowels were opened, and on the third flatus passed freely. The drainage-tube was removed on the third day; the wound around it required frequent dressing, as it suppurated, and pus exuded from the tracks of the ligatures. On the fifteenth day the temperature, which had been low, rose to 104°; but it was contrived that the pus collected around the wound should escape freely, and the temperature then rapidly fell to normal. On the nineteenth day, a large mass of sloughy tissue protruded from the lower angle of the wound, where the drainage-

tube had lain; it was readily removed, and was found to be the peripheral portion of the pedicle. The patient's condition became worse; a hard mass could be felt, on vaginal examination, behind the uterus; and on passing a sound through the abdominal wound, it could be felt through the vaginal walls, and a quantity of pus gushed out of the wound. A drainage-tube was again placed in the wound, and the discharge of pus rapidly diminished. The patient left the hospital (the k. k. Krankenanstalt 'Rudolf-Stiftung,' Vienna) two calendar months after the operation. 'I do not doubt a moment,' observed Dr. Weinlechner, 'that the recovery of this patient would have been very much shortened, had the pedicle not been replaced, but treated extraperitoneally.' [No doubt, but the replacing within the peritoneal cavity of a pedicle bruised by the clamp, caused the sloughing. Had the pedicle been treated intraperitoneally from the first, it would have been better still for the patient. The insertion of a drainage-tube hardly seemed necessary, if there were no adhesions excepting between the omentum and the cyst.—*Rep.*]

1865. *Haeckel on Affections of the Pleura in Diseases of the Female Organs.*—Acute pleurisy has for a long time been recognised as a complication in certain acute inflammatory affections of the female pelvic viscera. Dr. H. Haeckel, of Potsdam, has recently made some observations on pleuritic effusion occurring as an undoubted result of chronic ovarian and uterine disease. In all the cases which could be accurately examined by Dr. Haeckel, the inflammatory process had extended into the pleura from the peritoneum, and doubtless through the well-known communication of the cavities of those serous membranes through the lymphatics of the diaphragm. As in such cases, when an ordinary ovarian tumour exists, the pleural effusion is a result, the removal of its cause—namely, the tumour—is directly indicated, and in cases where this has been done the effusion has disappeared. But if there be good reason to believe that the tumour is malignant, then 'the existence of pleurisy, in which abundant carcinomatous elements are possibly to be recognised, implies that cancer has already scattered its deadly germs far and wide, so that it is no longer possible to extirpate the tumour radically.' [For pathological information of importance in regard to the real or supposed malignancy of solid ovarian growths causing peritoneal infection and effusion, see *Trans. Path. Soc.*, Vol. xxviii., p. 193; see also *ibid.*, Vol. xxxi., a paper by the reporter on a case of papilloma of the Fallopian tube, associated with ascites and pleuritic effusion. The character of the effusion made the case appear very unpromising, but the patient was in good health two years after the removal of the tube. Hence, provided that no graver symptoms of malignant disease exist, it is justifiable to perform an exploratory operation, at the least, in cases of ovarian tumour complicated by pleuritic effusion, although the effused fluid be rich in large vacuolated cells. In cases of ordinary effusion, there can be no doubt of the truth of Dr. Haeckel's observations.—*Rep.*]

1866. *Schröder on Fibroma of the Uterus.*—Between January 1874 and June 1881, 60 cases of this disease were admitted into the *Charité* Hospital, Berlin. Forty-five of the patients were married, including ten sterile subjects, and 12 had frequently aborted. The tumour was situated in the body of the uterus in 58 cases, in the cervix in 2. It was subperitoneal in 22, submucous in 38. In one case the tumour was found, after death, to be sarcomatous; in 4 advanced kidney-disease was discovered at the necropsy. Of the 38 submucous cases 16 were operated upon, one, successfully, by abdominal section, 4 by ligature, 11 by enucleation from the vagina; 3 of these 11 died. Professor Schröder is strongly in favour of continuous irrigation after enucleation. The remaining 22 cases of submucous fibromyoma were treated by ergotin injections. Of the 22 cases of subperitoneal fibromyoma 4 proved fatal, 2 after operation.

1867. *Böhm on Disease of Gaertner's Ducts.*—Professor C. Böhm, of Vienna, has observed cases of pathological change in the terminal part of Gaertner's ducts, close to the urethra. They secrete a quantity of a creamy fluid, which causes them to become greatly dilated; on pressure, the fluid can be squeezed out. This condition may constitute a disease in itself, or may exist as a complication of vaginitis and urethritis. When uncomplicated, it is very easily recognised by the nature of the reaction, and the total absence of any urethral or vesical pain. Professor Böhm cures this complaint by introducing into each duct a fine probe coated with nitrate of silver; in one obstinate case the duct was laid open. The distal ends of Gaertner's ducts appear in the adult as two blind tubes opening on the margin of the meatus urinarius. The ducts have been, in rare instances, found perfectly pervious throughout from the parovarium to the clitoris, by the side of which they, in such cases, open. In fœtal kittens, the ducts are readily detected in horizontal sections of the vagina, lying in the substance of its anterior wall, on each side of the urethra. [An account of the pervious condition of these ducts will be found in a notice of Professor Morison Watson's researches, in the LONDON MEDICAL RECORD, 1879. A description of the varieties of cystic disease observed along the entire course of the ducts, and the parovarium, whence they proceed, forms the subject of an article in the RECORD, 1882, p. 81.]

1868. *Pincus on a Case of Successful Removal of a Dermoid Ovarian Cyst, complicated with Perforation of the Bladder.*—A married woman, aged 27, had observed a tumour in her abdomen for two years, immediately after an attack of pelvic inflammation following her first labour. The urine, ever since, had occasionally been of a milk-white colour, and ten weeks before admission pus for the first time passed from the bladder. On introduction of a catheter, turbid fetid urine was drawn off, and on pressing the tumour a great quantity of purulent stinking discharge passed out of the instrument, and the growth diminished in size. The urethra was widened by Simon's dilator; the mucous membrane of the bladder could then be explored with facility. A rough place could be felt, whence pus exuded when pressure was made on the tumour, and the finger could be passed into an abscess-cavity of the size of an egg, and apparently double. Professor Czerny diagnosed a suppurating multilocular ovarian cyst. After drainage and washing out of the cavity of the cyst with solution of salicyl, the orifice of the perforation being also once dilated on account of retention of pus, the patient was discharged at the end of eight weeks apparently cured. Four months later the patient returned, worse than before, with fever, severe pain in the tumour, and very purulent urine. The previous line of treatment was continued for a month, without good results;

laparotomy was therefore performed. A dermoid cyst of the left ovary, of the size of a child's head, was discovered; it contained hair and teeth, and was intimately connected with the bladder by an adhesion an inch broad. After the separation of the adhesion an abscess-cavity, of the size of a hazel-nut, was exposed; this was lined with flabby granulations. It was thoroughly scraped and the bladder was closed, after removal of the tumour, by sutures passed deeply through its peritoneal coat. A drainage-tube was passed into the lower angle of the abdominal wound. The patient was quite well at the end of seven weeks; convalescence had been retarded by the formation of an abscess in the abdominal walls. Notwithstanding the presence of putrid pus in the bladder, no ammoniacal fermentation of the urine had been observed throughout the course of the case.

ALBAN DORAN.

1869. *Paladini on Transfusion of Blood by Hypodermic Injection.*—Dr. Paladini reports (*Gazz. Med. Ital. Lombardia*, Aug. 25) an interesting case of successful injection of blood into the subcutaneous cellular tissue of the abdomen in a woman suffering from profuse menorrhagia. R. S., aged 48, pluripara, had been suffering from menorrhagia for some time, and was reduced to an extreme degree of anæmia. On Aug. 4, the loss was so great that the patient's state became most alarming. Transfusion of blood was urgently indicated. The proper apparatus not being at hand, it was determined to inject the blood, by means of an exploratory trocar and ordinary metal syringe, into the subcutaneous areolar tissue of the abdomen. The blood was taken from the husband's arm, and agitated to prevent its coagulation. The trocar was inserted about four fingers' breadth to the left of the umbilicus, and pushed well in so as to somewhat break up the meshes of the areolar tissue and thus secure room for the blood to be injected. The stilet being withdrawn, an elastic tube was applied to the free end of the cannula and tied by a thread; the blood was taken up by an ordinary metal syringe (about 90 cubic centimètres in capacity), its nozzle being made fast to the elastic tube, and injected into the subcutaneous areolar tissue where it appeared as a lump about the size of an egg. Two syringefuls were injected. The patient felt no pain, and after two hours the swelling had entirely disappeared. No abscess or other ill effect followed, a slight ecchymosis only for a few days marking the site of the injection. On the next day, the patient was much better, and began to take and retain nourishment and sleep well; for some days before, there had been constant vomiting and no sleep. The lax areolar tissue lends itself admirably to the transfusion of blood and to its rapid absorption. The quantity of blood might be easily increased by repeating the injection in two or three different points, to 300 or 400 grammes. This method is free from the dangers of venous or peritoneal transfusion, and hence must be generally preferable.

1870. *Truzzi on the Application of the Forceps in Breech-presentations.*—Dr. Truzzi is strongly in favour of the use of forceps in breech-presentations. He says that, in cases of impaction of the breech in the upper or middle parts of the pelvic cavity, when the prompt extraction of the fœtus is indicated, and while one of the hips is not yet rotated under the arch of the pubes, it is better to have recourse to the application of the forceps to the fœtal pelvis than trust to traction on the groins, which is insufficient if practised with the fingers, and dangerous with the blunt hook or fillet. The proposal of Ollivier to apply the forceps on the thighs rather than to the pelvis of the fœtus, though seductive theoretically, does not answer practically. It is difficult to limit the pressure of the forceps to the thighs only; and if this be not done, the abdomen would be unduly pressed on and possibly even the liver injured. The convex extremities of the forceps pressing on the convex surface of the thighs gradually slip downwards and forwards, and after a few pulls the original good hold is lost. Much easier and safer is the plan of applying the forceps to the side of the fœtal pelvis. The iliac bones at this period are so elastic, and, compared with the bones of the head, are so protected by the soft parts, that, even if the force of compression be somewhat abused, it is not only difficult but almost impossible to injure the fœtal pelvis. To obtain a secure hold, the extremities of the blades must be passed beyond the crest of the ilium; when the handles are approximated, they bury themselves slightly in the abdominal parietes, and, on traction being applied, bear on the crests of the ossa innominata, and at the same time impart to the hips of the fœtus a convexity to which the concavity of the blades of the forceps exactly adapts itself. The liver runs no risk of injury, since, large as it is in the fœtus, it never descends to the level of the crest of the ilium; besides, its lowest part is the thin edge of the right lobe, which may be displaced inwards, but runs no risk of contusion or laceration by the external pressure of the forceps. The same may be said of the intestine which from its motility avoids the consequences of even considerable pressure if this be made in a methodical and gradual manner. A folded cloth may be placed, as suggested by Tarnier, between the handles of the forceps, to avoid using too great compression. The forceps takes a better hold, and the author has never seen it slip in sacro-anterior positions. He recommends, in some cases of sacro-posterior positions, that the position should be altered by a forcible rotation of the sacrum forwards before using traction. It is better, too, he says, to keep up a certain amount of compression in the intervals of traction; if this be not done, the iliac wings by their great elasticity tend to resume their normal shape, and possibly the forceps may be displaced.

G. D'ARCY ADAMS, M.D.

1871. *Kolago on Morbid Changes in the Ovaries in Certain Diseases.*—Dr. S. Kolago (*St. Petersburg Inaugural Dissertation*, 1882) has carefully examined the state of the ovaries in syphilis (one case), typhus (two cases), laryngeal diphtheritis (four), acute miliary tuberculosis (one case), and in acute poisoning by morphine (one case). He found the following respective changes. 1. In syphilis: endarteritis obliterans of the ovarian arteries; the process is identical with that described by Heubner for the brain-vessels. 2. In typhus: granular degeneration of the parenchyma of the ovary, hyperæmia of the interstitial tissue, opaque swelling of the endothel of vessels. 3. In diphtheria: hyperæmia of tissues, granular degeneration of the ovum and membrana granulosa. 4. In acute poisoning by morphia: fatty degeneration of the ovarian parenchyma and elements of the theca folliculi; intense hyperæmia of tissues with numerous extravasations, and swelling of the epithelium of blood-vessels, especially of capillaries. 5. In miliary tuberculosis of the lungs:

diffuse infiltration of the interstitial tissue with granulation-elements ; miliary tubercles.

1872. *Solovioff and Rodzewicz on the Statistics of Ovariotomy in Russia.*—In the *Meditz. Obozr.*, June 1882, Dr. A. N. Solovioff, of Moscow, gives a list of 250 ovariotomies performed in Russia up to the date of his paper. His table is supplemented by other 41 cases collected by Dr. H. J. Rodzewicz, of Nijni-Novgorod (*Vracheb. Vedom.*, 1882, No. 536). We combine both tables in one, in alphabetical order.

Operator.	Place.	Number.	Recovery.	Death.	Result Unknown.
1. Bredoff	St. Petersburg	1	—	1	—
2. Dobronravoff	Moscow	3	2	1	—
3. Troben	St. Petersburg	1	—	—	1
4. Glyszczynski	Warsaw	1	—	—	1
5. Goschtoft	Warsaw	1	—	—	1
6. Grube	Charkov	1	1	—	—
7. Grüniwald	St. Petersburg	1	1	—	—
8. Horwitz	St. Petersburg	1	1	—	—
9. Ikavitz	Tambov	9	4	5	—
10. Krassowski	St. Petersburg	122	67	55	—
11. Klin	Moscow	2	1	1	—
12. Kadé	St. Petersburg	1	—	—	1
13. Kitter	St. Petersburg	1	—	—	1
14. Korzenewski	St. Petersburg	1	—	—	1
15. Karavaieff	Kieff	4	2	2	—
16. Kosinski	Warsaw	11	7	6	—
17. Kuzmin	Moscow	1	1	—	—
18. Kuznetzky	Nijni-Tahil	19	14	5	—
19. Lebedeff	Moscow	1	1	—	—
20. Levshin	Kazan	5	4	—	1
21. Lazarevitch	Charkov	3	2	1	—
22. Liven	St. Petersburg	3	2	1	—
23. Markonet	Moscow	2	1	1	—
24. Maslovsky	St. Petersburg	1	1	—	—
25. Novatzky	Moscow	7	4	3	—
26. Prevost	Moscow	21	16	5	—
27. Rinek	Kieff	6	6	—	—
28. Savostitzky	Moscow	1	1	—	—
29. Sklifasovsky	Moscow	38	27	11	—
30. Slaviansky	St. Petersburg	2	2	—	—
31. Sokolovsky	St. Petersburg	4	3	1	—
32. Solovioff	Moscow	4	3	1	—
33. Studensky	Kazan	2	1	1	—
34. Stukovenkoff	Moscow	1	—	1	—
35. Szymanowski	Kieff	1	—	1	—
36. Tarnovsky	St. Petersburg	3	2	1	—
37. Vanzetti	Charkov	1	—	1	—
38. Vladimiroff	Kazan	2	—	2	—
39. Zaiaitzky	Moscow	1	1	—	—
		291	177	107	7

V. IDELSON, M.D.

1873. *Apostoli on the Treatment of Ovarian Pain by Electricity.*—M. Apostoli (*Rev. de Thérap.*, Sept. 1883, p. 224) makes use of a faradic stream of high tension, applied to the uterus, either by means of a double uterine electrode, or of an electrode pushed into the vagina, the other being placed on the hypogastrium. The stream must never be powerful enough to excite pain ; the sittings must generally be repeated daily, and last about ten minutes.

J. S. KAESER, M.D.

1874. *Prideaux on Cystic Polypus of the Rectum complicating Parturition.*—Mr. Prideaux, in the *Lancet*, Oct. 1883, p. 633, reports a case of a woman, aged 28, who was delivered of her first child on May 12, 1881. The labour was long and tedious, and Barnes's long forceps were resorted to. The child, when born, was found to have been dead some days. On April 27, 1882, the second labour took place, the first stage lasting over two days, accompanied by persistent dragging pain from one spot on the left side of the body. After waiting until the patient seemed completely exhausted, Mr. Prideaux introduced Barnes's long forceps, and succeeded, after some difficulty, in delivering the patient of a fine girl, born alive. During traction, the head seemed to slip past something very suddenly, and then came rapidly through the external opening, causing rupture of the perinæum. On the third day a large swelling, about the size of a fœtal head, was discovered in the rectum, and after consultation it was decided to remove the growth through the ruptured perinæum. The tumour was found to be a cyst as large as a fœtal head, with a long narrow pedicle. This was tied in two places, and cut between the ligatures. The patient made a good recovery. RICHARD NEALE, M.D.

1875. *Hofmeier on the Influence of Diabetes Mellitus on the Female Sexual Organs.*—Dr. Hofmeier, of Berlin (*Berliner Klin. Wochensch.*, Oct. 15, 1883), relates the following cases. A young woman, aged 24, from the age of fourteen years menstruated regularly, but had not borne children, was admitted into hospital for severe irritation and itching of the genitals. The uterus and ovaries were pronounced to be atrophied. The urine was loaded with sugar. Looking at the fact that diabetes in the opposite sex destroys sexual power, the atrophy of the uterus and ovaries, with absence of sexual appetite, was here regarded as secondary to the diabetes. It was matter of surprise to Dr. Hofmeier that this relationship had not been noticed more frequently ; he had notes of thirteen such cases out of 14,000 cases admitted into the women's clinique since October 1877. It should, however, be noticed that the patient in almost all cases had reached the period of the cessation of menstruation, having an average of forty-seven years of age. It was to be regretted, the author observes, that the presence or absence of sugar from the urine was not ascertained in all cases of concurrent affections of the genitals, and cessation of menstruation. The less frequent occurrence of diabetes in females than in males may account in some degree for the want of recorded observations.

W. B. KESTEVEN, M.D.

1876. *Taylor on Cancer of the Uterus in a Virgin.* Cancer of the uterus rarely occurs in virgins, but Dr. J. E. Taylor has reported to the New York Academy of Medicine (*Amer. Jour. of Obst*) the case of a virgin, 28 years of age, who died of that disease. He first saw her in Dec. 1881, and on examination, which was rendered difficult by the resistance of the hymen, he diagnosed cancer, and advised excision of the anterior part of the cervix, which was the part chiefly affected. No hæmorrhage had occurred, nor was any caused by the examination ; but on more careful examination he ascertained that the part which he had proposed to remove was very vascular, and he concluded not to operate. No hæmorrhage occurred and no discharge, but about a month later perforation of the rectum occurred, and gas then escaped by the vagina. Pain became such that the use of opium was necessary in constantly increasing quantities, until she took six or seven hundred drops of laudanum or its equivalent daily, and also a bottle and a half of brandy. She died suddenly from a profuse hæmorrhage, about three pints of blood escaping at one gush, the first hæmorrhage that had occurred. At the necropsy, the body of the uterus was found to be one mass of cancerous disease, and the cervix was entirely destroyed.

1877. *Rusconi on Sterility and Conception.*—The author, in an article of great interest (*Gazz. degli Ospitali*, Oct. 24, 1883), discusses one or two aspects of these subjects. Having drawn a distinction between infecundity, an irremediable condition, and sterility, a condition that may perhaps be removed, he goes on to divide this last (sterility) into two forms, mechanical and mechanico-pathological. In the mechanical form, the entrance of the semen into the body of the uterus is prevented. Mechanico-pathological sterility occurs in cases of uterine catarrh and other ailments, where, even if the semen succeed in reaching the cavity of the womb, it is only after it has been damaged chemically, and consequently is no longer active. The time and the manner of conception are then examined. The fact that fecundation may occur midway between two menstrual periods has given rise to four different theories: 1, that ovulation is not periodical in woman; 2, that the ovum may reach maturity during the excitement of sexual congress; 3, that the ovum may remain fertilisable in the uterus or oviduct; 4, that the semen retains its activity in the uterus until the ovum appears. In regard to the accelerated maturation of the ovum from sexual excitement, is mentioned the fact that girls who have never menstruated do so shortly after their first embrace. Then the author combats the old opinion that spermatozoa can make their way into the uterine cavity if they have been already abandoned only in the vagina. Pallen, Fraer, Rouget, and Kolbert, have all shown the falsity of such a doctrine. Experiments on the dead body are then related, which seem to put it beyond doubt that the semen can enter the uterus only at the time of coition. The rectum, bladder, and superficial pelvic fascia having been removed, the veins of the genital organs were injected. The uterus rose in the pelvis, the normal curvature diminished, the anterior wall became convex, the diameter of the cervix increased, and its external orifice dilated. At the time of the greatest engorgement of the vessels, the os uteri corresponds exactly to the centre of insertion of the vagina. Additional facts are drawn from clinical observation. In some cases of completely prolapsed womb, where irritation of the clitoris gives rise to insupportable orgasm, the mouth of the organ may be observed to open. Again, Pallen observed a case where the introduction of a speculum brought on the orgasm, during which the orifices could plainly be seen to dilate. Too great an intensity of the orgasm, however, is calculated to prevent conception, owing to excess of glandular secretions. As soon as the erection of the uterus is over, the mouth closes and the semen remains perfectly shut in. Hence injections used after coitus to prevent conception are without effect; unless, indeed, uterine contraction provoked by the cold water expel the contents. Injections of this kind, however, readily give rise to uterine catarrh and so cause sterility. In the author's opinion, the cure of sterility is not easily accomplished. Occasionally the results are fortunate; most frequently, however, there are insuperable obstacles. A caution is given, finally, as to the possibility of the failure being on the man's side. He has known a lady to be three years under treatment for sterility, the incapacity being really due to her husband, owing to the absence of spermatozoa in the seminal fluid.

1878. *Torino on the Vomiting of Pregnancy.*—The author being led to think that the affection depended on spinal anæmia of spasmodic origin or spinal irritation, examined the spinal column, and discovered that there were various painful points in the dorsal region. The symptoms, though obstinate until then, yielded at once to phosphide of zinc and nux vomica; about one-fourteenth of a grain of phosphide of zinc, and nearly half a grain of extract of nux vomica being given in pill three times a day. Whenever in like cases there are painful points in the spine, the author thinks that the preparations of strychnia and phosphide of zinc, or other kindred remedies, will give good results.

WILLIAM R. HUGGARD, M.D.

OPHTHALMOLOGY.

RECENT PAPERS.

1879. KOLBE, BRUNO.—On the Examination of Colour-Blindness in Russia. (*Vratch*, 1882, No. 28, pp. 459-61; and No. 32, pp. 526-9.)

1880. KATZAUROFF, I.—On the Value of Iodoform in Ophthalmic Practice. (*Vratch*, 1882, No. 42, pp. 713, 714.)

1881. PARGAMIN, M.—A Case of Entropion treated after Square's Method. (*Vratch*, 1882, No. 26, p. 434.)

1882. DUBELIR, D.—A Case of Malarial Amblyopia and Exophthalmos, Cured by Quinine. (*Meditz. Obozr.*, May 1883, p. 792.)

1883. ANDRUZSKI, E. J.—On Hemeralopia in the Insane. (*Arkhiv Psychiatriee, Neurologhiee ee Sudebnoi Psychopathologhiee* [*Archives of Psychiatry, Neurology, and Forensic Psychopathology*], 1883, Vol. i., Part ii., pp. 225-6.)

1884. DE GOUVEA, KUSCHBERT AND NEISSER, AND LEBER.—Hemeralopia and Xerophthalmia. (Gräfe's *Archiv*, Band xxix.; and *Centralbl. für die Med. Wiss.*, Sept. 8.)

1885. GOLDSCHEIDER.—The Action of Powdered Calomel on the Conjunctiva. (*Berliner Klin. Wochensch.*, Oct. 15.)

1886. TAYLOR.—Methods of Relieving Irritation caused by Eyelashes in Entropion. (*Lancet*, Sept., p. 536.)

1887. BOUCHERON.—The Secretions of the Eye. (*Le Progrès Méd.*, Sept. 1883.)

1888. DRANSART.—Excess of Tension in Detached Retina. (*Le Progrès Méd.*, Sept. 1883.)

1889. MARTIN, G.—Scrofulous Keratitis and Corneal Astigmatism. (*Annales d'Oculistique*, Tome xc.)

1890. GRUENHAGEN.—The Nerves of the Ciliary Processes in the Rabbit. (*Archiv für mikros. Anat.*, Band xxii., Heft 3.)

ART. 1879. *Kolbe on Colour-Blindness in Russia.*—According to Dr. Bruno Kolbe (*Vratch*, 1882, Nos. 28 and 32) the first examination of colour-blindness in Russia was made by Dr. Kron, of Helsingfors, who in 1876 inspected 1,200 railway workmen on the St. Petersburg-Abo line, and found 60 colour-blind subjects, 35 of them being wholly colour-blind, and 25 only partially so. He used Holmgren's method. In 1878 Drs. Skrebitzky, Hilus, and Höppner examined about 13,000 railway men on the lines Dünaburg-Bologoie, Bologoie-Nijni, and Dünaburg-Warsaw; they employed the methods of Holmgren and Donders, and found colour-blindness in 84 of the examined. Continuing his work among the newly admitted officials on the same railways, Dr. Höppner found 36 cases of colour-blindness in 3,101 (1·16 per cent.) during 1879; and 18 cases in 1,500 (1·20 per cent.) during 1880. In 1879 Dr. Wyruboff, examin-

ing after the methods of Holmgren, Stilling, and Donders, recognised 42 totally colour-blind (4·79 per cent.), and 82 partially so (9·52 per cent.) among 861 Orel-Vitebsk railway officials. During the same year Dr. Lubinsky, using Holmgren's method alone, met two cases of the defect among 377 Cronstadt schoolboys (0·53 per cent.), and, in 1880 and 1881, 278 (6 08 per cent.) cases of total, and 389 (8·5 per cent.) of partial colour-blindness, amidst 4.578 sailors and marine cadets. In 1880–82, Dr. Bruno Kolbe himself examined (after the methods of Holmgren, Stilling, Daae, Pflüger, and of his own) 1,235 women and girls in St. Petersburg and Livionia, 37 (2·95 per cent.) of whom were found possessing a weakened colour-sense, and two (0·16 per cent.) were wholly colour-blind. Of 2,931 men and boys, 206 (7·03 per cent.) presented weakened colour-sense, and 73 (2·50 per cent.) were totally colour-blind. In 1882 the author, together with Dr. Donberg, inspected 360 St. Petersburg marine cadets, and detected that 20 of them (5·56 per cent.) suffer from weak colour-sense, and seven (1·25 per cent.) from total colour-blindness. The latest examinations were made by Dr. Hermann, of Riga (see the LONDON MEDICAL RECORD, 1883, March, p. 97).

1880. *Katzauroff on the Value of Iodoform in Ophthalmic Practice.*—After a short review of the rather scanty literature of the question (Rava, Brettauer, Horner, Leber, Nieden, Singer, Grossman, Lange, Pajzderski, Deutschmann), Dr. I. Katzauroff (*Vratch*, 1882, No. 42) states that his own experience agrees with that of Dr. Deutschmann. The best results were obtained by him in purulent inflammations of the cornea. No benefit was observed in cases of catarrhal affections of the conjunctiva in trachoma, phlyctenulous conjunctivitis, and blennorrhœa gonorrhœa: on the contrary, the application of iodoform powder in many of such cases only intensified the existing irritation of tissues. The author details two interesting and instructive cases of an unsuccessful operation for cataract, in which there accidentally occurred subluxation of the lens and prolapse of the vitreous body, and in which the application of iodoform has prevented all dangerous consequences usually following the accidents of a similar kind, and saved the patient's sight. Dr. Katzauroff winds up his paper by fully recommending iodoform as an antiseptic very serviceable in ophthalmic practice. [Dr. Saltini's paper on the same subject is to be found in the LONDON MEDICAL RECORD, March, 1883, p. 99.]

1881. *Pargamin on a Case of Entropion operated on after Square's Method.*—Dr. M. Pargamin records (*Vratch*, 1882, No. 26) a case of senile entropion of both lower lids, in which he successfully applied the method recommended by Mr. W. Square, of Plymouth, in the *Brit. Med Jour.*, 1881, Nov. 2, p. 854. Having made a fold of the skein of the left lower lid, the author pinched it up with Vidal's *serres-fines*, and then tightly tied with a strong silk thread. The slough came off on the third day. Three weeks later, both lower lids were in their normal state, the right lid having corrected itself spontaneously, without any operative help. Dr. Pargamin emphatically puts forward the advantages of Square's method, such as simplicity, painlessness, bloodlessness, and so on.

1882. *Dubelir on a Case of Malarial Amblyopia and Exophthalmos Cured by Quinine.*—In the *Meditz. Obozr.*, May 1883, p. 792, Dr. D. Dubelir, of Moscow Military Hospital, reports an interesting case of a weak and anæmic soldier admitted with fever, considerable exophthalmos, and absolute blindness of the left eye. The left upper eyelid was œdematous, the conjunctiva injected, the pupillar reaction lessened. Ophthalmoscopic examination gave negative results. The history of the case showed that the patient previously several times suffered from fever, accompanied with blindness, which each time passed away after the cessation of the febrile attack. A ten-grain dose of sulphate of quinine was given. On the next day the exophthalmos was found decreased, and the patient's left eye could distinguish large objects. After a second dose of 15 grains, on the third day of treatment, the exophthalmos disappeared, and sight became normal. According to the explanation given by Dr. Memorsky, and accepted by Dr. Dubelir, the exophthalmos in this case was dependent upon intermittent œdema of the cellular tissue behind the eyeball.

1883. *Andruzski on Hemeralopia in the Insane.*—In the *Arkhiv Psychiatriee, &c.*, 1883. Vol. i., Part ii., p. 225, in an introductory note, Dr. E. J. Andruzski, of Charkov, states that his prolonged observations, conducted in the wards for the insane in the Charkov Zemsky Hospital, enable him to arrive at the following conclusions. 1. As an invariable rule, hemeralopia occurs in the insane more often in the springtime, when the patients, after their long winter seclusion, are suddenly exposed to the effects of bright sunlight. 2. Hemeralopia mostly appears in patients suffering from secondary dementia, passive melancholy with stupor, and chronic primary insanity (primäre Verrücktheit); in other words, in patients who generally are more or less immobile. 3. The monotonous character of the hospital dietary in a high degree favours the development both of anæmia and of hemeralopia in the insane. 4. Acute and chronic intercurrent diseases occurring in the insane before spring favour the development of hemeralopia. 5. Xerosis of the bulbar conjunctiva is markedly pronounced in all cases of hemeralopia in the insane. 6. The crowding of the patients, unsatisfactory ventilation, and other antihygienic conditions prevailing in the insane wards of the Russian hospitals, are very important causes favouring the development of hemeralopia. 7. In female insane patients, hemeralopia occurs much more seldom than in the male, and in the poor more frequently than in the rich and well-to-do. 8. Prognosis is, generally speaking, very favourable. The affection rapidly yields to the treatment; and, under the internal administration of cod-liver oil, bitters, and iron, disappears within two weeks without leaving a trace. 9. Hemeralopia in the insane is very often accompanied by symptoms of a general scorbutic diathesis. In those cases it is more obstinate and lasts longer (sometimes several months). 10. Patients who have been once affected with hemeralopia, almost invariably suffer from it again every year, approximatively at the same season. V. IDELSON, M.D.

1884. *De Gouvea, Kuschbert and Neisser, and Leber, on Hemeralopia and Xerophthalmia.*—1. Dr. De Gouvea (Graefe's *Archiv*, Band xxix., and *Centralbl. für die Med. Wiss.*, Sept. 8) submits that xerophthalmia is always a consequence of malnutrition. Xerotic changes, he notes, are preceded by hemeralopia, which may pass into amblyopia. Hemeralopia is considered by the author to be the result of anæmia of the retina, or of exposure to too strong light, and of bad or insufficient food. Among the first symptoms is to be noted a change in the

appearance of the conjunctiva around the cornea, which there assumes a dark colour and loses its glossy aspect. The membrane becomes dull, dry, and skin-like, and loses its sensitiveness. A feverish condition, with lowering of the constitutional powers, attends these changes, whence Dr. De Gouvea names the affection xerophthalmia cachectica. 2. Messrs. Kuschbert and Neisser (*ibid.*) have observed an epidemic of conjunctival xerosis and idiopathic hemeralopia in the Breslau Orphan Asylum. Of eighty children, twenty-five suffered from both of these affections. The attack commenced in the spring of the year, declined towards autumn, and reappeared in the following spring. Many of the children were also subjects of nasal catarrh, and spongy and hæmorrhagic gums. Masses of a white mucous deposit were seen on the conjunctival mucous surface, but did not extend to the palpebral surfaces. The affection went through its course without complication or inflammation of the cornea. The mucous masses on the conjunctiva were found to consist of fatty matter and necrosed epithelium, enveloping bacilli, which could be isolated by the use of ether. Efforts at their cultivation were not attended with success, neither was inoculation of the same followed by marked results. [The authors, however, designate these bacilli as 'characteristic.'—*Rep.*] In one case of leucoma typical bacilli were found in great abundance. Previous infectious conditions had existed. 3. Dr. Leber (*ibid.*) examined a case of xerosis, with ulceration of the cornea. The patient died from broncho-pneumonia. The epithelial cells of the conjunctiva were loaded with bacilli. Cocci of split fungus were found in the corneal layers, and in the pus within the eye-ball. The insertion of these on the conjunctiva of a puppy, produced keratitis, with colonies of the same bacilli.

1885. *Goldscheider on the Action of Powdered Calomel upon the Conjunctiva.*—Dr. Goldscheider, of Niesse, relates the following case in the *Berliner Klin. Wochensch.*, Oct. 15. A soldier, 22 years of age, the subject of right-sided phlyctenular conjunctivitis, was treated with calomel powder. He came under notice as a recruit, was badly nourished, and anæmic. After fifteen powderings, ectropium of the lower lids was remarked; the conjunctiva was of a dark-red colour, and in the whole length of its duplicature at the folds of the lid presented a firmly attached white, apparently false, membrane. The patient had not used iodine. The calomel was pure. There was no diphtheria in the hospital. The membrane resolved itself into small shreds in about sixteen days, the mucous surface remaining of a dark-red colour. It was surmised that the calomel had been converted into corrosive sublimate through the presence of the saline constituents of the tears. The sprinkling of calomel on the eyes, at the same time that iodides have been taken internally, has been known to be followed by decomposition of the chloride, and the separation of the iodide of silver by the lacrymal secretion. This patient, as observed, had not taken iodine. The calomel had come into contact only with the lacrymal fluid; a double chloride had been formed by free acids and albuminates of the blood, as takes place out of the living body, resulting in the bichloride, and the ammonio-chloride, or white precipitate. In order to put the matter to the proof, the experiment was tried on the conjunctiva of the left eye, and was followed by the same irritating results in a less degree. That the calomel was absorbed from the conjunctiva, was proved by the presence of the mercurial in the urine. W. B. KESTEVEN, M.D.

1886. *Taylor on Method of Relieving Irritation caused by Eyelashes in Entropion.*—Dr. C. B. Taylor, in the *Lancet*, Sept. 1883, p. 536, describes a simple remedy for relieving the irritation caused by the contact of the eyelashes with the eyeball in simple or senile entropion. The plan consists in wearing a small clip, attached to the skin of the face just below the lower eyelid, the weight of the instrument dragging the lid downwards, and often causing permanent relief. After wearing the clip for some time, it may be better to remove the piece of skin which has been compressed: this is painless, and the operation causes the patient no inconvenience. A woodcut is given showing the mode of application of the clip. RICHARD NEALE, M.D.

1887. *Boucheron on the Secretions of the Eye.*—Boucheron (*Le Progrès Méd.*, Sept. 1883), treating of gouty detachments of the retina, repeats that the ocular liquids are secretions, and not merely transudations. The aqueous humour thus secreted has the peculiar property of destroying the white corpuscles, the proper corneal cells, and the fibres of the lens. The vitreous humour also destroys the fibres of the lens when brought into contact with them. He maintains that these liquids are secreted by the epithelium of the ciliary processes, just as the choroid epithelium secretes the fluid of the visual purple of Boll. These epithelial secretors may be, like others of similar nature, the secretors of fibrinous flocculi forming pseudo-membranes; or they may produce an excess of serous exudation which may, in the case of the choroid, cause detachment of the retina. The usual cause of such an exudation he takes to be rheumatism and excess of uric acid in the blood. To determine this, he tests the saliva of the patient by the murexid reaction. Pilocarpine injections cure by getting rid of this excess of uric acid through the salivary glands.

1888. *Dransart on Excess of Tension in Detached Retina.*—Dransart (*Le Progrès Méd.*, Sept. 1883) maintains that in detached retina we sometimes find an excess of tension. He takes this as an indication that myopia and glaucoma are closely related, the latter being merely an increased stage of the former. He takes this as an indication for treatment by iridectomy and pilocarpine.

1889. *Martin on Scrofulous Keratitis and Corneal Astigmatism.*—Dr. Georges Martin, of Bordeaux, describes in the *Annales d'Oculistique*, Tome xc., Pts. 1 and 2, a relation which he has found to exist between the form of keratitis commonly known as scrofulous and corneal astigmatism. He has made this out by the aid of the ophthalmometer, presented by Javal and Schiötz at the London International Congress of 1881. Naturally there are difficulties in making observations during the height of the keratitis, but sometimes, when this is monocular, valuable indications are derivable from the condition of refraction of the other eye. From a total of forty-two cases, he concludes that the astigmatism is at least 1·5 D. At present he will not assert taht this occurs universally, though he has found no case free from at least this degree of astigmatism during the year that his attention has been devoted to this subject. It will, therefore, probably result that the term 'scrofulous keratitis' will more properly be replaced by 'astigmatic keratitis.' He is, nevertheless, strongly of opinion that the astigmatism alone is not a sufficient cause, but that it must be supplemented by a

feeble constitution, and by occupations demanding a prolonged and minute use of the eyes. He thinks that the partial use of the ciliary muscle, first indicated by Ivanoff in 1870, is the primary cause of the disordered nutrition of the eye, the avascular cornea being the part which first suffers. He proposes to treat rationally by atropine, and by the use of correcting cylinders.

1890. *Gruenhagen on the Nerves of the Ciliary Processes in the Rabbit.*—Gruenhagen (*Archiv für mikros. Anat.*, Band xxii., Heft 3) has examined carefully the ciliary processes of the albino rabbit, and fails to find the ending of a nerve-plexus on the capillary walls as described by Bremer. He has found, however, *between* the capillaries, in addition to axis-cylinders and elastic fibres, certain branching nucleated corpuscles containing fine granular pigment. Gruenhagen believes that these are in reality multipolar ganglion-cells, and that they are a ganglionic end-plexus of the fifth nerve.

W. A. BRAILEY, M.D.

DISEASES OF THE THROAT AND NOSE.

RECENT PAPERS.

1891. GORE.—Thirty Cases of Acute Goître Treated Successfully by the External Application of the Biniodide of Mercury Ointment. (*Dublin Jour. of Med. Science*, July 1883.)

1892. KOCH.—Primary Sarcoma of the Thyroid Body. (*Annales des Maladies de l'Oreille, du Larynx, &c.*, Sept. 1883.)

1893. LABBÉ.—A Case of Suppurating Cyst of the Thyroid Body. (*Annales des Maladies de l'Oreille, du Larynx, &c.*, July 1883.)

1894. GOUGUENHEIM.—Three Cases of Œdema of the Glottis. (*Ibid.*)

1895. GOUGUENHEIM. — Œdema of the Aryteno-epiglottidean Folds, especially in Chronic Affections of the Larynx. (*Ibid.*)

1896. CADIER.—Laryngeal Auto-inoculation of Tuberculosis by Direct Contact of Symmetrical Points of the Vocal Cords. (*Annales des Maladies du Larynx, &c.*, Sept. 1883.)

1897. STRASSMANN.—A Case of Peculiar Vocal Spasm. (*Monatschrift für Ohrenheilkunde*, No. 5, 1883.)

1898. MCSHERRY.—Two Cases of Laryngeal Stenosis. (*Transactions of the Medical and Chirurgical Faculty of the State of Maryland, Baltimore*, April 1883.)

1899. ARNOLD.—Some Forms of Laryngeal Paralysis. (*Ibid.*)

1900. GOUGUENHEIM.—The Indications for Tracheotomy in Laryngeal Tuberculosis. (*Annales des Maladies de l'Oreille, du Larynx, &c.*, Nov. 1883.)

1901. BLANC.—Cysts of the Larynx. (*Revue Mensuelle de Laryngologie, &c.*, Nov. 1883.)

1902. VOLTOLINI.—Laryngeal Fork for Extirpating growths in the Larynx. (*Monatschrift für Ohrenheilkunde*, No. 11, 1883.)

1903. MACKENZIE.—On the Local Application of Bichloride of Mercury in Affections of the Throat and Nose. (*Maryland Med. Jour.*, Feb. 15, 1883.)

1904. MORMICHE.—Adenoma of the Soft Palate. (*Paris Méd.*, July 28, 1883.)

1905. SWINBURNE.—Adenoid Vegetations of the Pharyngeal Vault. (*New York Med. Record*, Oct. 6, 1883.)

1906. MACKENZIE.—A Hitherto Undescribed Malformation of the Naso-Pharynx. (*Archives of Laryngology*, Vol. iv., No. 3, July 1883.)

1907. MACKENZIE.—Nasal Cough, and the Existence of Sensitive Area in the Nose. (*American Jour. of Med. Sciences*, July 1883.)

1908. ROE.—Nasal Disease as a Frequent Cause of Asthma. (*Transactions of the Annual Meeting of the American Med. Association* of June 1883.)

1909. JACQUEMART.—Two Cases of Polypi of the Nasal Fossæ, and a Case of Pseudo-Polypus. (*Revue Mensuelle de Laryngologie*, Nov. 1883.)

1910. BARATOUX.—Syphilitic Necrosis of the Bones of the Nose. (*Revue Mensuelle de Laryngologie*, August 1883.)

1911. ROBINSON.—Deviation of the Nasal Septum. (*Practitioners' Society, New York*, May 5, 1883.)

1912. LOMISKOVSKY, M.—Hæmorrhagia Tracheæ Punctata. (*Vratch.* 1832, No. 44, p. 748.)

1913. HACK.—Neuralgic Accompaniments of Lesions of the Pharynx. (*Deutsche Med. Wochensch*, October 17.)

1914. KRAKAUER.—Cyst of the Epiglottic Ligament. (*Deutsche Med. Wochensch.*, October 24.)

1915. MEUSEL.—Retention of the Cannula after Tracheotomy. (*Deutsche Med. Wochensch.*, Aug. 8.)

1916. TOLEDO, F.—On Laryngeal Tuberculosis. (*Revista de Med. y Cirurgia Practica*, Aug. 7 and 22, 1883.)

1917. FERNANDEZ AND SANCHEZ.—Two Cases of Leeches in the Trachea. (*Revista de Med. y Cirurgia Pratica*, March 7, 1883.)

1918. GLOVER.—Emetics for Bones in the Throat. (*Lancet*, Oct. 1883, p. 632.)

1919. NOURSE.—A Case of Calculus in the Nostril. (*Brit. Med. Jour.*, Oct. 1883, p. 728.)

1920. COHEN, J. SOLIS.—The Diagnostic Significance of Immobility of one Vocal Band. (*American Jour. of Med.*, July.)

ART. 1891. *Gore on Thirty Cases of Acute Goître treated successfully by the External Application of the Biniodide of Mercury Ointment.*—Surgeon-Major Gore has collected thirty cases of goître (*Dublin Jour. of Med. Science*, June 1883) successfully treated in this manner, that occurred in the 30th Regiment, at Ranikhet, Bengal, from May 1881 to Nov. 1882. The disease assumed the dimensions of a small epidemic affecting 1·3 per cent. of the strength. The first cases came in quick succession after the first heavy fall of rain in June; the weather having been very hot just before. The second small outbreak in August was also preceded by heavy rains. In two cases admitted in December the weather was very cold, and there had been no rain. During 1882, acute goître continued to show itself at intervals, there being sixteen admissions. The average time in the hills of the thirteen patients admitted in 1881 was 365 days, minimum 186, maximum 563. They were, as a rule, young soldiers, the average age being 22 years. With one or two exceptions, there was no previous history of malaria. None of the women or children of the regiment were affected. The treatment adopted was biniodide of mercury rubbed in for ten minutes or more, as the patient sat with the enlarged gland exposed to the sun or a strong fire. The locality, length of residence, some impurity in the water not easily determined, and individual predisposition or peculiarity, are the combination of causes which, according to Dr. Gore, would best explain the origin of the disease. The one common factor was a certain length of residence in the hills—a goîtrous locality—averaging a year at the station.

1892. *Koch on Primary Sarcoma of the Thyroid Body.*—The author (*Annales des Maladies de l'Oreille, du Larynx, &c.*, Sept. 1883) contributes a case of this affection. The patient, a woman aged 60, noticed six months ago an increasing difficulty in swallowing (probably after the thyroid body had been affected some time), and three weeks ago difficulty of

respiration. The appetite was lost, and the pain was acute—intermittent and violent. There was a tumour over the thyroid body, exactly resembling that body enlarged. The skin was intact and adherent, and the symptoms were those of suffocating goître. As dyspnœa was threatening life, tracheotomy was performed. Owing to the presence of the growth, this was done with the greatest difficulty. The trachea was finally discovered in the left of the neck; its rings and contour could not be recognised. There was only a canal of very small diameter, the walls of which were formed by the sarcomatous mass. The narrowing had proceeded to such an extreme that a cannula of the smallest dimensions could not be forced through, but perforated the tissues instead, and entered the œsophagus, thus showing that the latter was also involved in the degeneration. The symptoms could not be relieved by the operation, and the patient died twelve hours afterwards. Dr. Koch adds the following conclusions. Malignant tumours of the thyroid body are generally easy to distinguish from benign, but the diagnosis between sarcomata and scirrhous cancers is often difficult, sometimes impossible, and moreover of no practical value. The prognosis is absolutely bad. The treatment, which can only be purely symptomatic, should be rigorously executed; the difficulties which present themselves should not hinder the surgeon from trying to overcome the dysphagia, and particularly the dyspnœa.

1893. *Labbé on a Case of Suppurating Cyst of the Thyroid Body.*—The patient, aged 28 (*Annales des Maladies du Larynx*, July 1883), lived up to 17 years of age in a country where goître was not rare. Nine months previous to admission she noticed a troublesome sensation in the throat, and two months after that a tumour began to form, growing very gradually to its present size. There was increasing difficulty in breathing and swallowing, though the voice and general health were not affected. She continued, after admission, four months in this condition, when the respiratory trouble increased to such an extent that thyrodectomy was performed. The tumour, of oval form and of the size of an egg, was situated in front of the neck, extending downwards to just above the suprasternal notch. It had deep adhesions to the larynx and trachea, and moved in a vertical manner during deglutition; it was firm and elastic, and the skin over it was free and healthy. An U-shaped incision having been made around the tumour, the lower limits of which were embraced by the concavity, the flap was reflected; and the tumour, isolated and bared anteriorly, was then enucleated. This proceeding was made rather troublesome by the rupture of the cyst-wall and the escape of its fluid and purulent contents. The loss of blood was but slight. The wound was dressed antiseptically, the flap replaced and sutured, and a small drainage-tube inserted. The patient was discharged within the month with the wound soundly healed.

1894. *Gouguenheim on Three Cases of Œdema of the Glottis; two occurring in Acute and one in Chronic Phthisis.*—The interest of the first case (*Annales des Maladies des Oreilles, du Larynx, &c.*, July 1883) consists in the total absence of laryngeal dyspnœa in spite of the existence of œdema of the glottis. The same interest in this particular attaches to the second case, in which there moreover existed a paralysis of the vocal cords. These were in the cadaveric position, like that they assume when both recurrents are cut or compressed. The third case shows the possibility of tuberculous masses in the ary-epiglottidean folds existing without producing dyspnœa and suffocative fits. It also seems to show the possible and frequent origin of the suffocative attacks in the existence of large sublaryngeal glands to which the author called attention in an article on Tracheo-Laryngeal Adenopathy, in the *Gazette Hebdomadaire de Médicine* for 1881.

1895. *Gouguenheim an Œdema of the Aryteno Epiglottidean Folds, especially in Chronic Affections of the Larynx.*—The conclusions of Dr. Gouguenheim on this subject (*Annales des Maladies de l'Oreille, du Larynx, &c.*, July 1883), are as follows. 1. This form of œdema is not always accompanied by dyspnœa. 2. When dysphagia is absent (which is rare) the œdema may be lateral and only be detected by the laryngoscope. 3. On laryngoscopic examination, the œdematous or hypertrophied folds do not join or approach on inspiration, as Sestier has said, but on the contrary separate, following in this the movements of the vocal cord during respiration. 4. When the patient phonates, the tumefied folds approach, but without causing dyspnœa; and it is only when this movement is prolonged that spasm is produced and consequently dyspnœa. 5. When the folds are so œdematous that they are in contact, they are almost completely immobile, and inspiration does not cause dyspnœa, but emission of a sound, and a too prolonged examination produces spasm and dyspnœa very quickly, but without visibly changing the folds. 6. In a very pronounced case, laryngoscopic examination, made during a fit of suffocation, allowed it to be seen that instead of approaching at the moment of inspiration, the folds separated very slightly. Suffocation and dyspnœa were not then the result of the mechanical approach of the tumefied folds, but of spasm only of the cords which was increased by a prolonged examination and by the emission of a sound. 7. The theory of Sestier as an explanation of the cause of suffocation in these cases is not correct. 8. The fits of suffocation and the inspiratory whistle are only due in these cases to an intercurrent spasm, either of reflex origin, or caused by compression of the recurrent nerves. 9. The discovery of the aryteno-epiglottidean mass without accompanying dyspnœa is not a therapeutic indication of tracheotomy. 10. The tumefied folds must only be touched with great caution on account of the spasm thus provoked. 11. Spasm, in these cases, is not always an absolute indication for tracheotomy, for it often disappears, sometimes very rapidly; under different remedies, external or internal. 12. The author finishes by insisting that laryngoscopic examination should be made where there are signs of laryngeal suffocation, which nearly all physicians attribute to œdema of the folds, for such an examination may discover the existence of subglottic lesions that will influence the manner of operation.

1896. *Cadier on Laryngeal Auto-inoculation of Tuberculosis by Direct Contact of Symmetrical Points of the Vocal Cords.*—The author (*Annales des Maladies du Larynx*, &c., Sept. 1883) has had several cases in which he has been able to trace the transmission of tuberculosis from one vocal cord to a symmetrical point on the opposite cord. In the first case, while the right cord presented a rather deep ulceration, a redness only of the symmetrical point on the left was remarked, the contact of

the tubercle-bacilli having not yet determined more than irritation and inflammation. Ten days afterwards, a swelling of the inoculated spot was noticed, and epithelial desquamation, and even a little superficial ulceration of the mucous membrane. Finally, eight days afterwards, true ulceration was established, secreting muco-pus, capable in its turn of producing a fresh inoculation. By attentively studying the successive stages of the disease in this patient with the laryngoscope, the author could trace the ulcerating granulations extending on both sides of the first ulceration, and gaining by degrees the entire free border of the vocal cords. In the second, third, and fourth cases the same successive symptoms could be made out. In the fifth case, instead of an ulceration, the author first saw an ulcerated swelling on the cord first attacked; but the same redness, and then a more or less deep ulceration, followed in due time upon the other cord. Several other cases of the same kind have come under his notice, but not until a more advanced period of the affection had been reached.

1897. *Strassmann on a Case of Peculiar Vocal Spasm.*—A girl, aged 16, otherwise healthy (*Monatschrift für Ohrenheilkunde*, 1883, No. 5), involuntarily made, on inspiration, a peculiar noise like the croaking of a frog, which could not be produced at will, either on deep inspiration, or on speaking or crying. It also disappeared during sleep. The laryngoscopic image was normal. Galvanism, applied externally over the larynx, in six weeks effected a complete cure. In another case a child, 8½ years old, uttered a peculiar cry, like the bleating of a sheep, three or four times, at irregular intervals of about five minutes. There was also some laryngeal catarrh. Cure resulted after two applications of the galvanic current to the spine.

1898. *McSherry on Two Cases of Laryngeal Stenosis.*—Dr. McSherry gives the history of two cases of laryngeal stenosis (*Trans. of the Med. and Chirur. Faculty of the State of Maryland, Baltimore*, April 1883). The first patient was a woman with a history of syphilis. The breathing was laboured and noisy, and the voice a choked whisper; the arytenoids were enlarged and œdematous, the ventricular bands thickened and hardened, meeting together on attempted phonation. On deep inspiration, the ventricular bands and vocal cords separated slightly; but not sufficiently to give much breathing space. The left vocal cord was not visible, and only the edge of the right one was in view. Dr. McSherry introduced the laryngeal tube several times, but came to the conclusion that there were no adhesions producing the stenosis. He therefore applied iodide of glycerine twice daily to the parts; with these applications and constitutional treatment, the thickening of the ventricular band, &c., became much reduced. Some months afterwards the patient was reported as having very little trouble with her breathing, but her voice was still husky. The second patient was a man, whom Dr. McSherry was suddenly called to see in an attack of urgent dyspnœa. The uvula was gone, the velum was adherent to the posterior wall of the pharynx. There was complete destruction of the epiglottis and inflammation of the ventricular bands. On strained inspiration the glottis was not opened further than would allow the passage of a small goose-quill. Laryngo-tracheotomy was performed, and a double cannula introduced, which he wore without any great discomfort for six weeks. Attempts at dilatation with a small-sized Schrötter's tube (7½ millimètres in diameter) were made, but failed. Sulphate of copper was then applied for two weeks; and the thickening round the orifice having been reduced in this manner, the tube was passed daily for a month, increasing the size gradually until there was tolerably good breathing space in the larynx. The patient was then directed to wear the inner tracheal tube only at night, and during the day to keep the outer cannula corked up as much as possible. This was advised, in order that the laryngeal breathing might assist in dilating the orifice in the glottis. The treatment was persevered in, and in a year from the time of the first introduction the tracheal tube was dispensed with. The wound has since closed, and the voice is improving daily under astringent applications.

1899. *Arnold on some Forms of Laryngeal Paralysis.*—The first case (*Trans. of the Med. and Chir. Faculty of the State of Maryland, Baltimore*, April 1883) was that of a girl, aged 19, who, on recovery from diphtheria, was found to be quite aphonic. For six months nothing was done, but for the succeeding fourteen faradism and galvanism were used externally and internally, and strychnia subcutaneously. No good resulting, all treatment was desisted from for a year. When Dr. Arnold saw the patient, the parts appeared normal, except that on attempted phonation the left vocal cord remained nearly immovable, while the right advanced slightly beyond the median line. On touching the interarytenoid space with the tip of a sound, short isolated cough-acts were produced, at which times the cords met in the middle of the glottis before the expiratory effort; the cough besides had tone. Very delicate manipulations of the arytenoids were found to excite the action of the paralysed cord, without producing the cough. A very weak faradic current was used, one electrode being put upon the neck immediately over the left ring of the thyroid cartilage, and the other (Mackenzie's) introduced into the left pyriform sinus for ten to fifteen seconds at a time; the current was applied with short intermissions from ten to twenty minutes, and immediately afterwards the interarytenoid space was lightly brushed with a delicate elastic whalebone sound. After this had been persevered in for nearly three weeks, the patient acquired the vocal *a* (German inflection), and was instructed to practise that sound for hours at a time every day. The other vowel-sounds were soon gained, and in two months she could read 300 to 500 words without fatigue. It was not until another month had elapsed that she could distinctly enunciate tones in a register higher than the middle piano octave. The cure remained permanent for twenty-one months, when, after a powerful emotional impression, she again lost her voice. The aphonia yielded to a few days' treatment, and there has been no further relapse. The exclusively mechanical treatment and subsequent relapse prove that the paralysis was purely functional. The second patient, aged 43, had for four years previous suffered from frequent attacks of sore throat and hoarseness, and latterly had an unusually severe one, from which she did not recover. On laryngoscopic examination the right vocal cord was found red and slightly thickened, the left arytenoid was swollen to about twice its natural size and felt firm and unyielding, the left vocal cord was nearly invisible, and, except at its anterior third, was covered by a red angry-looking tumour which seemed to spring from the ventricle. On attempts to phonate, the tumour floated upon the ascending column of

air, but the whole left side of the larynx remained immovable. Dr. Arnold verified his suspicions that the tumour was a prolapsed ventricle by returning it with a sound, and in so doing the cord below came into view, unbroken on its surface, but red and tumefied. Its paretic condition was evidently due to the swelling of the arytenoid, and an infiltration of the thyro-arytenoid muscle, and perhaps also of the crico-arytenoideus lateralis of the same side. The prolapsed ventricle remained in its place, until expelled by a paroxysm of cough. The act of deglutition did not completely extrude the sack, but caused it to bulge outwards ; after which it sank back into its place, until the act of cough or phonation entirely extruded the ventricle over the cord. There being a doubtful history of syphilis, doses of mercury and proto-iodide and opium pills were prescribed, and insufflations of morphia and starch to allay the cough. The use of the voice was forbidden. In three weeks the cords and ventricular bands had regained their normal colour, and the movements of the two sides of the larynx were nearly equal, although the ventricle occasionally prolapsed. At each visit a few drops of tincture of iodine and glycerine, equal parts, were conveyed into the ventricle by a cotton-carrier. The improvement continued, and the voice is now completely restored ; the larynx is normal, except that the cords have not yet regained their opaline lustre.

1900. *Gouguenheim on the Indications of Tracheotomy in Laryngeal Tuberculosis.*—The author's conclusions upon this subject (*Annales de Maladies de l'Oreille, du Larynx, &c.*, Nov. 1883) are these. 1. Tracheotomy is not often necessary in laryngeal tuberculosis ; 2. but may be so in certain forms. 3. In acute phthisis, rapid caries of the arytenoid cartilages may lead to attacks of suffocation proving rapidly fatal, although it is true that death occurs most often before this eventuality. 4. In chronic phthisis tracheotomy is especially necessitated by the four following forms : (*a*) Caries of the thyroid and cricoid cartilages (in this case the operation may not only save the patient, but greatly prolong life) ; (*b*) tubercular infiltration of the mucous membrane of the vestibule and of the superior vocal cord, which may block the laryngeal cavity (in this case the operation may also greatly prolong life) ; (*c*) infiltration and very great thickening of the vocal cord ; (*d*) immobility, and approaching of the vocal cords, almost entirely closing the glottis, due to paralysis of the dilators or permanent spasm of the adductors (in these two latter cases the operation is only a palliative, the pulmonary lesions being too far advanced).

1901. *Blanc on Cyst of the Larynx.*—The two following cases have come under the personal observation of Dr. Blanc (*Revue Mens. de Laryng.*, Nov. 1883). The first patient, aged 57, had suffered for a long time with glandular pharyngitis and catarrhal rhinitis, and for several months from an increasing and inexplicable malaise, which had unfitted him for his occupation. With the laryngoscope, a large mass (of the size of a nut) was seen to occupy the place of the glottis, leaving so narrow an aperture that it was surprising that the patient could still breathe. He had never suffered either from dysphagia or from dyspnœa. Fluctation being perceptible, a cyst of the larynx was diagnosed. The cyst was opened, and cauterised with the galvano-cautery. The parts immediately assumed their normal appearance, the voice became clear, the respiration easy, and the headache, loss of sleep, and vertigo, were lost from that time. The interest of these cases lies in the age of the patient, the absence of laryngeal trouble, and the serious derangement of the general health and the method of operation, which was quick, easy, and gave the best results. The second case was that of a girl, ten years old, who had suffered from laryngeal and bronchial catarrh. The cervical and maxillary glands were enlarged. The voice, which had never been natural, was rough and feeble, more like that of a man than of a child. A tumour, of the size of a large almond, was found covering the left part of the larynx ; and, fluctuation being perceptible, was diagnosed as a cyst. Puncture was made with the galvano-cautery, easily and without causing pain, and thick grumous material was let out, as from a dermoid cyst. The aperture was not sufficiently large to evacuate all the contents ; but as the child now breathed easily, and spoke much better, nothing further for the present was done. Dr. Blanc believed the cyst to be a congenital dermoid one of the antero-lateral part of the neck, developed in the third branchial cleft, and then, pushing aside the muscles and membranes, appearing in the larynx.

1904. *Mormiche on Adenoma of the Soft Palate.*—Dr. Mormiche has collected (*Paris Médicale*, July 28, 1883) nine cases. According to him, the soft palate is usually affected, sometimes both hard and soft, and rarely the hard alone. The tumours are always lateral, and never pass the median line. They offer the greatest analogy to adenoid tumours of the breast. They are always encapsuled, are indolent, grow slowly, and are but rarely attended with functional troubles. They are easily distinguishable from malignant growths. Their prognosis is good, but they may recur like lipoma. The treatment consists in incision, followed by enucleation.

1905. *Swinburne on Adenoid Vegetations of the Pharyngeal Vault.* — Dr. Swinburne, in a long review of this important subject (*New York Medical Record*, Oct. 6, 1883), states that he has operated in sixteen cases of this affection. He describes a gag that he has invented for the purpose of opening the mouth and retracting the palate. He discusses the different methods of removing these growths, viz., by the curette, by caustics, by the galvano-cautery, by the wire loop (which may be either the galvano-cautery loop or the écraseur), and by the forceps. Of these the author gives the preference to the forceps, as he considers that removal in this way is radical, *i.e.* that the vegetations are all removed at one sitting ; and further, that it is not followed by any inflammatory reaction, and is, moreover, performed in less time than any of the other operations, and that there is no more hæmorrhage than accompanies the other methods, and what there is ceases spontaneously as soon as the operation is complete. Most cases of adenoid growths in the pharynx, he believes, are also accompanied by hypertrophy of the tissue covering the turbinated bones. This he destroys by the galvano-cautery before removing the adenoid tissue. There is always considerable inflammation following the cautery, but he has never seen any harm result when used in the nose. In the naso-pharynx, on the other hand, the healthy parts cannot be so well protected, and the mouths of the Eustachian tubes are liable to be burned, and acute inflammation of the middle ear to follow.

1906. *Mackenzie on a hitherto undescribed Malformation of the Naso-pharynx.*—This case is published

in the *Archives of Laryngology*, Vol. iv., No. 3, July 1883. The patient was a girl, aged 14, and suffered from symptoms of progressive nasal obstruction, with pharyngeal catarrh dependent upon the presence of a mass of papillary vegetations in the naso-pharynx. During the examination, it was discovered that the naso-pharynx was separated into two lateral halves by a thin bony partition continuous anteriorly with the posterior edge of the vomer, and inserted posteriorly into the posterior pharyngeal wall. Superiorly it became fused with the pharyngeal vault. The septum narium was slightly deflected to the left from before backward; the bony lamella had a similar inclination, and seemed to be in fact a backward prolongation of the vomer. Its inferior edge was more or less sharp, clearly defined, and curved from before backwards and upwards, presenting a very marked resemblance to the normal posterior curve of the nasal septum. Its insertion into the pharyngeal wall was on a higher plane than that of its origin, which corresponded with the inferior edge of the septum. Attempts were made to dislocate it, but without success. After the growths (none of which sprang from the partition) were removed, the symptoms rapidly disappeared; and the abnormal septum was then seen to be covered with apparently normal, though congested, mucous membrane.

1907. *Mackenzie on Nasal Cough and the Existence of a Sensitive Reflex Area in the Nose.*—The object of this communication (*Amer. Jour. of Med. Sciences*, July 1883), is to direct attention to the great frequency of cough as a symptom of nasal disease, and to indicate as far as possible the manner of its production. The clinical and experimental investigations of the author have led him to the following conclusions. 1. In the nose there exists a well-defined sensitive area, the stimulation of which, either through a local pathological process, or through the action of an irritant introduced from without, is capable of producing an excitation which finds its expression in a reflex action or in a series of reflected phenomena. 2. This sensitive area corresponds, in all probability, with that portion of the nasal mucous membrane which covers the turbinated corpora cavernosa. 3. Reflex cough is produced only by stimulation of this area, and is only exceptionally evoked when the irritant is applied to other portions of the nasal mucous membrane. 4. All parts of this area are not equally capable of generating the reflex act, the most sensitive spot being probably represented by that portion of the membrane which clothes the posterior extremity of the turbinated body, and that of the septum immediately opposite. 5. The tendency to reflex action varies in different individuals, and is probably dependent upon the varying degree of excitability of the erectile tissue. In some, the slightest touch is sufficient; in others, chronic hyperæmia or hypertrophy of the cavernous bodies seems to evoke it by constant irritation of the reflex centres, as occurs in similar conditions of other erectile organs. 6. This exaggerated or disordered functional activity of the area may possibly throw some light on the physiological destiny of the erectile bodies. Among other properties which they possess, may they not act as sentinels to guard the lower air-passages and pharynx against the entrance of foreign bodies, noxious exhalations, and other injurious agents to which they might otherwise be exposed?

1908. *Roe on Nasal Disease as a Frequent Cause of Asthma.*—After discussing the various theories that have been advanced to account for asthmatic attacks, Dr. Roe (*Annual Meeting of the American Med. Association*, June 1883), pointed out that there were two modes in which nasal disease may provoke an attack. 1. The most frequent form results from a narrowing or occlusion of the nasal passages by hypertrophied tissue or nasal polypi. 2. Another form is induced by disease of the pituitary mucous membrane, unassociated with hypertrophy or polypi. The first, he thinks, is both mechanical and nerve reflex in its character, whilst the second is purely reflex. It is a noticeable fact that nasal polypi and hypertrophied tissue, when inducing asthma, are almost invariably located on the posterior end of the turbinated bone, the area that has been likened by Dr. Mackenzie, to the sensitive cough centres found in the pharynx and larynx. This fact explains the more frequent occurrence of asthma at night in those persons suffering with hypertrophic nasal catarrh. At the posterior end of the inferior turbinated bone, the cavernous erectile tissue is much thicker and more dilatable than at the anterior; consequently, when in the recumbent position, the gravitation of fluid distends this portion of tissue and together with the accumulation of secretion occludes the passage on the recumbent part, or reflex irritation of the air-passages results, and the attack comes on. Dr. Roe appends several cases in which treatment applied to the nose cured the asthma. He advocates removal of the hypertrophied turbinated bones by the bone nasal scissors and the hypertrophied tissue by Jarvis's snare.

1909. *Jacquemart on Two Cases of Polypi of the Nasal Fossæ, and a Case of Pseudo-Polypus.*—These are published in the *Annales des Maladies de l'Oreille, du Larynx*, &c., May 1883; *Revue Mensuelle de Laryngologie*, Nov. 1883. The two cases of polypi are worthy of note, the first because of the abundance of the neoplastic products, the extraction of which necessitated not less than fifteen sittings. In the second case, there was a considerable adhesion between the middle turbinated bone and the septum; the nasal fossæ were, moreover, singularly narrow. The difficulty in extraction caused by these conditions was overcome by using a flexible stem to Wilde's polypotome. The case of pseudo-polypus occurred in a boy 12 years old, who presented a large tumour in each nasal fossa, which was pedunculated and situated upon the lower turbinated bone. These tumours resembled polypi, and were mistaken for such. The treatment was by ignipuncture.

1910. *Baratoux on a Case of Syphilitic Necrosis of the Bones of the Nose.*—The patient (*Revue Mensuelle de Laryngologie*, Aug. 1883) had for a few years complained of pain in the nasal fossæ, of muco-purulent secretion from the nostrils, and more recently of severe and obstinate headache. During this time fragments of the turbinated bone came away on blowing his nose. Rhinoscopic examination revealed the complete destruction of the inferior and middle turbinated bones, each nasal fossæ forming a single cavity. The uvula no longer existed, and on the junction of the hard and soft palate there was a triangular perforation admitting the tip of the little finger. The patient could breathe no longer through the nose, and had lost all power of smell. Injections of sulphate of soda to cleanse the cavities were prescribed, and after the first ap-

plication a piece of necrosed bone came away, which proved to be the middle part of the sphenoid bone. The purulent secretion abated. After a short time the patient died of pneumonia, without having had any cerebral symptoms. No *post mortem* examination was made.

W. J. WALSHAM.

1912. *Lomiskovsky on Hæmorrhagia Tracheæ Punctata.*—In the *Vratch*, 1882, No. 44, p. 748, Dr. M. Lomiskovsky, of Professor V. G. Lashkevitch's clinic, in Charkov, describes under this name two cases of a peculiar affection of the tracheal mucous membrane, observed in women with irregular menstruation. In both of the author's patients, the disease was preceded by five or six days' retention of the menses, and was ushered by slight rigors and rise of temperature, and headache, which symptoms were rapidly followed by aphonia. Laryngoscopic examination revealed the usual state of the laryngeal mucous membrane, but the oscillations of the vocal cords, especially of their posterior halves, were considerably weakened. The glottis, during phonation, remained open almost to a third. The tracheal mucous membrane was found bright-red, over the whole laryngoscopic field ; it was covered with abundant dark-red points, about the size of a pin's head or larger. Generally, the state of the tracheal mucous membrane closely resembled peliosis rheumatica. Dr. Lomiskovsky believes that the tracheal affection in both of the patients depended on the disturbances in their sexual sphere.

V. IDELSON, M.D.

1913. *Hack on Neuralgic Accompaniments of Lesions of the Pharynx.*—The *Deutsche Med. Wochensch.* of October 17 reports a lecture of Dr. Wilhelm Hack, of Freiburg, delivered in the fifty-sixth meeting of German Naturalists and Physicians, on neuralgic accompaniment of pharyngeal lesions. His attention was first called to the subject in connection with a patient on whom he had performed various cauterising operations of the nose, on account of obstinate migraine and pains in the nape of the neck, and who, having been cured of those, came complaining of pains between the shoulders, and of a peculiar burning and tickling in the throat. He himself suggested that the throat should be burned for the cure of the pain, as his nose had been for the pains in the neck. The only lesion in the throat was a marked hyperæmia, and Dr. Hack, not considering himself justified in having recourse to cauterisation for so slight an ailment, tried various remedies without any result, until he was at last persuaded to use the galvano-cautery. The pain between the shoulders at once subsided, and also the peculiar feeling in the throat. In another case that came under his care the pain was in front, above the clavicles, and in the pharynx a little granulating tumour was visible, bleeding on the slightest touch. After the destruction of the tumour by the galvano-cautery, the pain over the clavicles completely disappeared, to return again with a slight return of the growth, which was easily removed in the same way. In a third case, hypertrophy of the inferior turbinated bone had caused stoppage of the nose and hyperæmia of the pharynx, with which was associated lancinating pain over the clavicles, which vanished in the same way when the hypertrophy was overcome. The neuralgic pains appear to accompany slight pharyngeal affections more often than severe ones, and always those which are hypertrophic in character rather than the atrophic. The neuralgia is sometimes in the form of sudden, sharp pains, of lightning rapidity ; sometimes more diffused, and 'rheumatic' in character. Their cause must remain to a great extent hypothetical, but it probably depends on the termination of the nerves in the pharyngeal mucous membrane.

1914. *Krakauer on Cyst of the Epiglottic Ligament.* In the Berlin Medical Society, on October 17, Herr Krakauer read a paper on a case of a cyst of the left ligamentum ary-epiglotticum (*Deutsche Med. Wochensch.*, October 24). The patient was a boy aged 10, who had suffered for some years from severe dyspepsia and complete hoarseness. A cyst, about the size of a walnut, was found between the folds of the left ligamentum ary-epiglotticum, fixed firmly there without a pedicle. Incision failed to evacuate the tenacious colloid contents, and the whole tumour had to be extirpated, with the effect of completely curing the patient. The case is unique, so far as the speaker's knowledge of literature is concerned, the nearest approach to it being one of Sommerbrodt's, in which the tumour was pedunculated, and only of the size of a cherry.

1915. *Meusel on Retention of the Cannula after Tracheotomy.*—Dr. E. Meusel, of Gotha, communicates to the *Deutsche Med. Wochensch.*, Aug. 8, two cases of tracheotomy, where the cannula could not be removed for some months. Both were children, only 2½ years old, and the difficulty seemed to be caused by the softness of the cartilage, causing the trachea to be obstructed when the head was inclined forwards or to one side. It was finally overcome by means of a stopper made of horn, which filled up the external opening and kept the walls firm ; the little patients were enabled to sleep all night without difficulty of breathing, and the wound gradually closed, after the removal of the stopper, which was effected in a few weeks.

ALICE KER, M.D.

1916. *Toledo on Laryngeal Tuberculosis.*—Toledo contributes an able paper on this subject to the *Revista de Med. y Cirurgia Practica.* His remarks on the treatment are practical and useful. Under the head of general treatment he insists on the advantage of a country life in any suitable climate, mentioning especially the province of Guipuzcoa, Alicante, and Malaga, as winter stations, and the baths of Otalora, Santa Agneda, and Alceda, as summer residences. The patient must be condemned to absolute silence, so as to fatigue as little as possible his injured larynx. As to drugs, he recommends the phosphates and hypophosphites of soda and lime, the latter especially ; phosphate of lime is indicated in the hypertrophic form or where vegetations exist, with scanty secretion without inflammatory symptoms ; sulphide of calcium in ulceration and fever from reabsorption ; arsenic in dermoid transformation of the mucous membrane, in superficial ulcers with scanty secretion, and when the 'medical symptoms predominate.' Mercury in small doses is a tonic ; it increases the red blood-corpuscles, and the body-weight. It is indicated when the mucous tissue is inflamed and ulcerated with signs of membranous exudation ; when there is generalised catarrh with abundant muco-purulent secretion and red extensive fungous ulcers, which easily bleed. Creasote is useful in the torpid forms of phthisis, in acute forms it is of no use. *Local Treatment.*—Cauterisation with weak solutions of nitrate of silver (2 to 2½ per cent.) facilitates deglutition, and calms the pain. When there is an inflam-

matory state of the anterior commissure, daily application of the following solution is useful:—hydrochlorate of morphia, 1 gramme; glycerine, 20 grammes. Twice a week cauterisations should be made with a mixture of creasote, 1 gramme; alcohol, 25 grammes; glycerine, 75 grammes; or sometimes, in place of this, chloride of zinc, 50 centigrammes; water, 10 grammes; glycerine, 40 grammes. In the necrotic period, when there is œdema, cauterisation with chromic acid, and the topical use of morphia and glycerine are recommended. For the spasmodic cough he recommends hydrochlorate of morphia, 20 centigrammes; bromide of potassium, 10 grammes; water, 100 grammes; in the form of spray, sometimes adding to this arseniate of soda (Cadier). Iodoform, dissolved in ether, is also very useful applied topically (Massei and Masucci). Scarification, as recommended by Marcet, when there is much induration without great tubercular deposit, he does not approve of. Tracheotomy, too, he thinks only justified to avoid asphyxia. Schmidt has proposed (Congress of Laryngology at Milan) extirpation of the arytenoid cartilages, increased and infiltrated with tubercular deposits, by means of scissors resembling laryngeal forceps. This might be justified if the tuberculosis were confined to the larynx; the destruction of the lesion then would be as harmless as is the removal of many embryonal fibrous or caseous lymphatic products, but whether tuberculosis ever is so localised is extremely doubtful.

1917. *Fernandez y Sanchez on Two Cases of Leeches in the Trachea.*—1. A man, aged 60, suffered from cough, tickling of the throat, and expectoration of blood. The throat was red and injected. The symptoms increasing in severity, Dr. Sanchez explored the larynx with the laryngoscope. After one or two attempts, he recognised a leech in the trachea at the head of the first or second ring, and with appropriate forceps managed, with patience, to extract it, the patient being immediately relieved. 2. A woman complained of tickling and heat in the larynx, frequent cough, hoarseness, and expectoration of blood. With the laryngoscope a leech was seen, stretched from above downwards on the anterior surface, reaching below the insertion of the vocal cord. The leech was seized by the forceps and extracted. In the villages and country districts of the south of Spain leeches are often found in the fauces or in the respiratory tract. They are taken unnoticed while small in the water, and may give rise to very puzzling and uncomfortable symptoms.

G. D'ARCY ADAMS, M.D.

1918. *Glover on Emetics for Bones in the Throat.*—Dr. Glover, in the *Lancet*, October 1883, p. 632, draws attention to the fact that several textbooks in surgery do not mention the use of emetics, as a means of dislodging foreign bodies in the throat. A case is quoted in which a lady had swallowed a mutton-bone whilst taking some soup; the patient was not seen until twenty hours after the occurrence, when she suffered considerably; after much difficulty she swallowed half a drachm of sulphate of zinc dissolved in water; this not producing vomiting, another half drachm was given, and in a few minutes free emesis began; almost the first thing vomited was a piece of bone measuring nearly an inch in length and half an inch in breadth. The author had two other cases of fish-bone in the throat, both of which were relieved promptly by an emetic. [In the *Medical Digest*, 590 : 4, a novel plan of dislodging foreign bodies from the nose is referred to. So soon as the emetic begins to act the hand, guarded by a napkin, is clapped over the mouth, and so all the force of the emetic is directed through the nose and thus clears it of the foreign body.—*Rep.*]

1919. *Nourse on a Case of Calculus in the Nostril.*—Mr. Nourse in the *Brit. Med. Jour.*, October 1883, p. 728, records a case of a lady, aged 23, who was annoyed by excessive fœtor of the breath, and who fancied there was something in the left nostril. There was nothing to be seen, and there was no discharge. On directing the probe well down to the floor of the nostril, a hard movable substance was detected, which was extracted with some difficulty. The substance proved to be a calculus, about one inch in length and nearly an inch in breadth. Its weight was forty-six grains. On touching it with dilute acid, a few minute bubbles of gas were disengaged. It was of a light drab colour, and could be broken by moderate force. In the centre was a fragment, which appeared to be of a bony structure. RICHARD NEALE, M.D.

1920. *Cohen on the Diagnostic Significance of Immobility of one Vocal Band.*—Dr. J. Solis Cohen, in a paper in the July number of the *American Journal of the Medical Sciences*, points out, first, that laryngoscopy may sometimes be the sole, or most efficient means of diagnosis in affections located exterior to the larynx; and second, that a liability to error might often be incurred were we to place too exclusive a reliance upon the objective symptoms, as presented by the image seen in the laryngoscopic mirror. From a study of cases under his observation he concludes as follows. 1. Whenever the left vocal band is immobile in abduction, or in the cadaveric position (positions in which the patency of the glottis is not interfered with), and there is cough or dyspnœa (or both), without cardiac or pulmonary lesion to account for these symptoms, we are justified in suspecting aneurism of the aortic arch; and difficult deglutition will be almost certainly confirmatory of the diagnosis, notwithstanding the absence of tumour, pulsation, thrill, and bruit. The only, and exceedingly improbable source of error, would be intrathoracic neoplasm. 2. Ankylosis of the crico-arytenoid articulation may fairly be suspected in cases of immobility of one vocal band, not referable to mechanical interference with the transmission of nervous force; unaccompanied with evidence of central or local nervous disease; and in which failure to respond to appropriate treatment will warrant us in excluding muscular atrophy. But the diagnosis can be finally established only by the application of direct pressure to the affected arytænoid cartilage. 3. Whenever one vocal band is immovable in the cadaveric position or in abduction, and there are no other signs or symptoms to assist the diagnosis, ankylosis being eliminated, we should not be satisfied with a diagnosis of neuropathic paralysis, but should keep the patient under observation, with a view to detecting the earliest manifestation of aneurism, consolidated lung, or other mechanical cause for the impaired innervation.

FAT WOMEN.—A showman who has been letting out some of the secrets of his trade, says that in the case of fat women who are exhibited, a hollow needle is made to penetrate the adipose to the areolar tissue, and through this air is forced until the subject is distended to her full limit. What is, therefore, commonly held as fat is largely made up of wind.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

1921. ZENKER.—A Hitherto Undescribed Industrial Nervous Affection.

1922. RUMPF.—A Case of Acute Ascending Paralysis. (*Deutsche Med. Wochensch.*, and *Centralbl. für die Med. Wiss.*, Sept. 22.)

1923. HUNNIUS.—Recovery from Acute Ascending Paralysis. (*Deutsche Med. Wochensch.*, Oct. 24.)

1924. KOLLMANN.—Saltatory Spasms. (*Deutsche Med. Wochensch.*, Oct. 3.)

1925. LESSER.—The Nerve-Lesions in Herpes Zoster. (Virchow's *Archiv*, Band xciii.; and *Centralbl. für die Med. Wiss.*, No. 48.)

1926. KAST.—Ataxic Movements in Acute Transverse Affections of the Spinal Cord. (*Centralbl. für die Med. Wiss.*, No. 48, 1883.)

1927. WESTPHAL.—Grey Degeneration following Nerve-stretching. (*Centralbl. für die Med. Wiss.*, Dec. 1.)

1928. STEFFEN.—Hydatids of the Brain. (*Jahrbuch für Kinderheilk.*, Band xx., Heft 1.)

1929. MARIE.—Disseminated Sclerosis in Children. (*Jour. de Méd. Prat.*, Oct. 1883.)

1930. OLLIVIER.—Trophic Lesions in Locomotor Ataxy. (*Jour. de Méd. Prat.*, Oct. 1883.)

1931. BAILLARGER.—On General Paralysis. (*L'Union Medicale*, Nov. 1883).

ART. 1921. *Zenker on a hitherto Undescribed Industrial Nervous Affection.*—Dr. Zenker, of Bergquell, near Stettin, gives the detailed history of five cases of paralysis of the foot and leg of a labourer in potato-fields. These people, from their long constrained posture on their knees, or with one knee bent, become the subjects of paralysis of sensation and motion of the lower extremities. In the autumn they are employed for days and weeks in digging up the potatoes with a short-handled three-pronged fork, and collecting them in baskets. From morning until evening they are compelled to work in this one posture, with the knee forcibly bent, and the foot and toes extended, and the whole weight of the body thrown thereon. The result of this is paralysis of the limb, through compression of the nerve-trunks and the constant contact with the wet ground.

1922. *Rumpf on a Case of Acute Ascending Paralysis.*—Dr. Th. Rumpf (*Deutsche Med. Wochensch.*, and *Centralbl. für die Med. Wiss.*, Sept. 22) relates the following case. A previously healthy boy, 12 years of age, suffered from pains in his legs, ending in complete paralysis. The loss of power extended to the muscles of the trunk and upper extremities; loss of sensibility also came on in his thighs and legs, with total absence of reflex of the sole of the foot, but presence thereof in the cremaster. The function of the bladder and intestines remained normal, as did also the tendon-reflex of the knee and foot. Sometimes he suffered dyspnœa. In about six months some improvement appeared; reflex action and the cutaneous sensibility returned. The author explains the maintenance of reflex power by the inference that the grey substance of the spinal cord was not seriously affected. That the medulla oblongata was intact, he also assumed from the absence of symptoms referrible to the bladder. The retention of electrical excitability induced the author to the opinion that the lateral columns were as much affected as the anterior grey matter. Dr. Rumpf observed the excitability of the integuments of the back to keep pace with the paralysis, and adds that galvanism exerted a beneficial effect. W. B. KESTEVEN, M.D.

1923. *Hunnius on Recovery from Acute Ascending Paralysis.*—The *Deutsche Med. Wochensch.*, Oct. 24 and 31, contains an account of a case of acute ascending paralysis, followed by recovery, communicated by Dr. Hunnius of Glückstadt. The patient was a carpenter, aged 64, who had been perfectly healthy until the beginning of June, 1882 when he had to work for three hours in heavy rain. Three weeks later, he began to feel weakness in both legs, which rapidly increased until he could neither stand nor walk, but in the beginning of July his arms and hands were still unaffected. On July 27, when he first applied to a medical man, he could no longer get out of bed without support, and some loss of power had begun to manifest itself in the arms and hands. The sensorium was unaffected, the muscles were flcacid, but not atrophied, and the plantar and patellar reflexes were completely absent. The sphincters were intact, the cutaneous sensibility was normal, and no visceral lesion could be discovered. By the middle of August his condition was very deplorable, the paralysis of all four extremities being complete, and a few days later he suffered much from dyspnœa, affecting chiefly the expiration. The functions of the bladder and rectum remained perfect, but he soon lost the power of chewing, and could take only fluid nourishment, the swallowing of a morsel being a tardy and difficult process. His speaking also became affected, being very slow, indistinct, and hoarse. He was not seen again by Dr. Hunnius until Sept. 23, when, to his astonishment, he opened the door for him, walking and standing quite easily. He spoke clearly and fluently; his hands had recovered so completely that he occupied his time with knitting, but the knee-reflex was still absent. By the end of January it had returned to the right leg, but the left was not fully recovered until the end of May. The treatment consisted in the inunction of mercurial ointment along the spine, and the internal administration of nitrate of silver.

1924. *Kollmann on Saltatory Spasms.*—Dr. Oscar Kollmann, of Würzburg, reports to the *Deutsche Med. Wochensch.* of Oct. 3 a case of abnormal reflex irritability in the form of saltatory spasms. The patient, a woman aged 24, had been committed for theft, and came under Dr. Kollmann's observation in the prison. She had never suffered from infantile convulsions of any sort; but at six years of age she sustained a severe burn of the foot, at nine a traumatic inflammation of the knee, and at fourteen or fifteen she had dragging pains in the limbs, attributed to rheumatism. Menstruation appeared in the sixteenth year, and had always been very irregular, preceded by various symptoms of headache and weariness. No hysterical symptoms had been present. She had suffered during previous imprisonments from inflammation of the eyes and from various catarrhs, and in April of this year she was admitted to hospital on account of pulmonary tubercle. In July there were marked signs of tubercle of the right lung, but no other abnormality except tenderness over the ovarian region and over the dorsal vertebræ; but whenever the skin was percussed or tapped sharply, in whatever part of the body, reflex contractions were at once excited, although pressure might be made gradually without

this result. So long as the patient remained in bed, no further symptoms were noticeable; but, as soon as she attempted to place her feet on the floor, clonic convulsions set in, the feet being drawn back as if they had touched hot iron. The face was at the same time flushed and anxious, the patient feeling a sensation of constriction about the chest, but no pain anywhere. The fit ceased when the soles no longer touched the floor, but it left great exhaustion. Pressure with the hand on the soles of the feet induced similar convulsions, which might be confined to one side by touching the corresponding foot only; tickling had no effect. The first attack of this nature came on quite suddenly while she was about to take exercise in the courtyard, and all the attacks were excited by pressure on the soles of the feet. The author suggests that they may be dependent on tubercular meningitis. He does not, however, venture on an opinion; but promises to return to the subject on a future occasion. ALICE KER, M.D.

1925. *Lesser on Nerve-lesions in Herpes Zoster.*—An abstract of an article by E. Lesser, in Virchow's *Archiv*, Band xciii., is given in the *Centralbl. für die Med. Wiss.*, No. 48. To his two previous cases, with the *post mortem* appearances, Lesser now adds a third, which confirms the justice of the view that herpes zoster is a nervous affection. During life, the eruption occupied the cutaneous regions of the fifth, and partly of the fourth, intercostal nerves. After death, the fifth was found strikingly thinner, flattened, and of a translucent reddish-grey colour, contrasting with the normal tint. The fourth was similarly affected, but to a less extent. The microscopic investigation of the fifth intercostal nerve showed degeneration of numerous nerve-fibres; the fifth intercostal ganglion had almost lost its normal structure in its whole proximal half, while the tissue which normally contains nerve-elements was almost entirely replaced by connective tissue. There was similar deficiency of ganglion-cells and nerve-fibres in the fourth ganglion, though to a less degree, with extensive connective tissue fibres in their place. But no distinct atrophy of the nerve-elements of the fourth intercostal nerve was made out. In regard to the connection between the nerves and skin-affections, Lesser is of opinion that by the irritation of certain nerves, or, apparently, from the discontinuance of their functions, the death of particular parts of their tissue is caused in the corresponding cutaneous regions. The alterations may be microscopically minute, and in this case superficial, or they may assume larger dimensions, and then penetrate deeper. In any case, a reactive inflammation is the result of these processes.

1926. *Kast on Ataxic Movements in Acute Transverse Affections of the Spinal Cord.*—A summary of this paper appears in the *Centralbl. für die Med. Wiss.*, No. 48, 1883. Two cases of so-called transverse paraplegia are described. The first was that of a man, aged 26, with fractured vertebræ, hæmorrhage into the dural sac (?), compression-myelitis of the dorsal spinal cord, complete motor paraplegia, and slight disturbance of sensibility. Gradual restitution of movement in the lower limbs, with the development of typical ataxy, occurred, and an almost perfect cure resulted. In the second case, a man, aged 22, had acute transverse myelitis, with complete motor, and partial sensory paraplegia, and incontinence of the bladder and rectum. Considerable improvement followed an intercurrent erysipelas, and severe typhoid fever. Pronounced ataxy occurred during the return of motor power without appreciable disturbance of the muscular sense, and a cure resulted in a year and a half. A kind of intermediate stage between the paralysis and the return of motility occurred in both cases, in which a considerable defect of coordination was apparent, with retained, and relatively only slightly disturbed, general strength. Since, according to general experience, coordination depends on undisturbed function of the posterior columns, it is possible that regeneration is relatively late here. It is remarkable that, in spite of the loss of coordination, and of the relaxation of the muscles of one or both sides, the tendon-reflexes persisted, and were even increased. These facts at any rate do not support Tschirjeff's view upon the origin of ataxy (*Centralbl. für die Med. Wiss.*, 1879, p. 842). In conclusion, the author remarks upon the very favourable influence of the two infectious diseases upon the recovery of one of the patients; such influence has been often observed in mental diseases.

1927. *Westphal on Grey Degeneration following Nerve-stretching.*—Westphal has recently described the following case, of which an abstract is given in the *Centralbl. für die Med Wiss.*, Dec. 1. A man, aged 30, had chronic motor paresis of the lower limbs, to which were added spastic symptoms, contractions, heightened reflex excitability, increased knee-jerk, disturbances of sensibility. These latter affected chiefly the sense of temperature, extended over legs and buttock, and were very variable. Upon energetic stretching of the right crural nerve there followed immediate transitory disappearance of the knee-jerk, and the rigidity of the side operated on; the permanent results were, incontinence of urine and fæces, flexion with rigidity in the lower limbs, and greater inability to move. Death ensued three days after the operation, with gradual increase of the symptoms, after an intercurrent right-sided hemi-anæsthesia and ataxy. *Post mortem* there were found—diseased spots in the brain, pons Varolii, and medulla oblongata; diffused sclerosis of the spinal cord in the cervical and dorsal regions (most intense mid-dorsal), and multiple foci of degeneration in the right half of the lumbar region. Here there existed chronic cerebral degeneration in spots with diffused spinal degeneration. The foci in the right half of the lumbar region of the spinal cord were, in all probability, the result of a pull upon the cord by the nerve stretching. A case is given of spastic spinal paralysis, in which nerve-stretching had done good as to the spastic phenomena, without effecting, however, any lasting improvement.

E. J. EDWARDES, M.D.

1928. *Steffen on Hydatids of the Brain.*—Dr. Steffen (*Jahrbuch für Kinderheilk.*, Band xx., Heft 1) has made a collection of all the cases he has found recorded, and has contributed one from his own practice. This occurred in a girl 10 years of age, who was healthy until within a year of her admission to the hospital. Somewhat remarkably, however, she menstruated at irregular intervals from the age of five years to within six months of her death. A year before her admission she fell, and immediately afterwards vomited and showed signs of cerebral disturbance. The vomiting returned at intervals, and other symptoms declared themselves—such as severe headaches, numbness of various extremities, and muscular spasms. Four months ago a ladder fell on her head, and soon after that the gait became

unsteady and the intellect weakened. On admission the body was fairly nourished, the gait staggering, tendon-reflex slight, the left side of the face partially paralysed, and articulation difficult. There was slight deafness, the pupils were somewhat dilated, and the intelligence was feeble. She had occasional headaches, and vomited much after food; the evacuations were voluntary; there was no change in the urine. Five days later, the symptoms became more marked; the pulse was slow and irregular, the pupils were sluggish. With the ophthalmoscope papillitis with congestion of veins, &c., was detected. Fifteen days later, she had occasional violent headache; the pupils, especially the right, were much dilated and insensible to light: the pulse was irregular, and loss of consciousness complete; respiration was stertorous. Occasionally there were general convulsions, followed by slight contraction of the upper extremities and rigid extension of the lower extremities. Both the contractions and the rigidity were most marked on the left side. There was no pyrexia at any time. The patient died the same evening. *Post mortem*, a capsule, easily detached, and measuring 8 centimètres by 6 centimètres (3·2 inches by 2·4 inches), was found in the substance of the right hemisphere, resting on the right lateral ventricle, and reaching to within half a centimètre of the longitudinal fissure. The convolutions were flattened, and the left lateral ventricle was distended with fluid. Brood-capsules, daughter-cysts, and echinococci were all present. The family appear to have had an old dog, but it is not known whether he was affected with worms. RALPH W. LEFTWICH, M.D.

1929. *Marie on Disseminated Sclerosis in Children.* M. Marie (*Jour. de Méd. Prat.*, Oct. 1883, p. 456) has collected fourteen cases, most of which were observed in England. The symptoms are the same as in adults, and may begin as early as the fourteenth month, but more frequently they do not appear before the third or fifth year. The disease is sometimes hereditary, but in other cases it follows some eruptive fever. It may be mistaken for hereditary tabes and chorea, but in the latter the involuntary movements persist during rest, and the muscles of the face, eye, and tongue are not affected.

1930. *Ollivier on Trophic Lesions in Locomotor Ataxy.*—M. Ollivier (*Jour. de Méd. Prat.*, Oct. 1883, p. 474) has observed a case which shows that hyperidrosis must be added to the long list of trophic anomalies which may be caused by locomotor ataxy. In one of his patients, three years after the onset of the disease, an abundant secretion of sweat was observed on the hands and feet. There was also at the same time a well-marked seborrhœa of the scalp. J. S. KAESER, M.D.

1931. *Baillarger on General Paralysis.*—In the study of general paralysis, Dr. Baillarger (*L'Union Médicale*, Nov. 1883) has arrived at the following conclusions. 1. There are but two constant and pathognomonic symptoms of general paralysis, namely, dementia and paralysis. It is essentially a paralytic dementia. 2. The paralytic dementia pursues its course, in a large variety of cases, without the patient showing delusions. It thus exists independently of insanity. 3. There is a species of insanity characterised by quite peculiar delusions of inflated vanity or of hypochrondriasis, with which are generally associated the symptoms of muscular ataxy. This species of insanity, considered hitherto either as simple insanity or as a form of general paralysis, is quite peculiar to it. Even when it is present in the slightest degree, general paralysis is threatened; it may be called paralytic insanity. 4. To this paralytic insanity may be referred all the cases recently described under the name of general pseudo-paralysis, at least those which are of the insane variety. 5. Paralytic insanity may terminate by recovery; sometimes simple dementia results without paralysis, but in the majority of cases it ends in paralytic dementia. General paralysis is often a secondary disease. 6. Paralytic insanity may suddenly declare itself in the course of chronic peri-encephalitis; it is then a serious complication. 7. When paralytic insanity is developed at the commencement of chronic peri-encephalitis, recovery is rather frequent, but the primary and principal disease pursues its course. This is what takes place in what are called the remissions of general paralysis. 8. Paralytic insanity, apart from these special characteristics, manifests the same symptoms, the same varieties, and the same changes as simple insanity. Inasmuch as patients affected with different forms of simple insanity arrive by different routes at simple dementia, so do patients affected with different forms of paralytic insanity arrive by different ways, but much more rapidly, at paralytic dementia. 9. Paralytic insanity has been hitherto referred to simple circulatory troubles; it is constituted by two different elements; one vesanic, and the other somatic. This is insanity *cum materiâ*.

PHYSIOLOGY.

RECENT PAPERS.

1932. SCHREIBER.—Physical Investigation of the Œsophagus and Stomach, with Special Reference to Intrathoracic and Intra-abdominal Pressure. (*Deutsches Arch. für Klin. Med.*, Band xxxiii.; *Centralbl. für die Med. Wiss.*, No. 46, 1883.)

1933. VOIT.—The Influence of Bile in the Assimilation of Food in the Intestines. (*Centralbl. für die Med. Wiss.*, March 14.)

1934. GRÉHAUT AND QUINQUAUD. The Volume of Blood in the Bodies of Living Mammals. (*Comptes Rendus*, Tome xciv.

1935. HELFREICH.—The Intra-ocular Circulation and the Venous Pupil in the Retina. (*Gräfe's Archiv;* and *Centralbl. für die Med. Wiss.*, March 14.)

1936. KRATSCHMER.—The Proportions of Hydrocarbons in the Human Liver. (*Wiener Med. Wochensch.*, 1883, No. 13.)

1937. FEUERSTACK.—The Development of Red Blood-Corpuscles. (*Zeitschr. für Wiss. Zool.*, Band xxxviii.; and *Centralbl. für die Med. Wiss.*, July 28.)

1938. CURCI.—The Action of Morphia on the Circulation of the Blood. (*Lo Sperimentale*, May 1883.)

1939. ANREP, V. K.—A Contribution to the Physiology of Respiration. (*Vratch*, 1882, No. 28, pp. 458–59.)

1940. HUSSON.—The Influence of Spices on Digestion. (*Wiener Med. Blätter*, Sept. 27.)

ART. 1932. *Schreiber on the Œsophagus and Stomach with special reference to Intrathoracic and Intra-abdominal Pressure.*—J. Schreiber devotes a paper to this in the *Deutsches Arch. für Klin. Med.*, Band xxxiii., of which the following abstract is given in the *Centralbl. für die Med. Wiss.*, No. 46, 1883. A. *The Intrathoracic and Intra-abdominal Pressures.*—The pressure in the stomach,

estimated by the sound and manometer, is often negative; but less negative than in the œsophagus. Positive pressure depends in reality upon contractions of the stomach, easily caused by the irritation of the sound; also from contractions of the abdominal muscles. In quiet breathing especially, there is negative intra-abdominal pressure. B. *The Amount of Intrathoracic Pressure.*—In healthy persons a higher manometer value (200 millimètres of water on deep inspiration) was found than Rosenthal gives; but the author thinks the above value was not the true intrathoracic pressure, but partly dependent upon contractions of the œsophagus following upon its distension by the sound. C. *Varieties of Intrathoracic and Intra-abdominal Pressure.*—In opposition to Emminghaus and Gerhardt, varieties of respiratory pressure in the stomach could always be shown by the manometer, and were synchronous with the œsophageal. The pressure-values for the stomach and gullet only showed an inverted ratio in these under chloroform. D. *Determination of the Position of the Heart.*—The above pressure-values were not enough to determine this; but the introduction of a sound, armed with a small India-rubber balloon, is recommended. This is blown out in the stomach, then partially withdrawn till the opposition of the heart is felt. The length of sound withdrawn is then measured.

E. J. EDWARDES, M.D.

1933. *Voit on the Influence of Bile in the Assimilation of Food in the Intestines.*—C. Von Voit (*Centralbl. für die Med. Wiss.*, March 14) records his observations and experiments upon a dog, of seventy kilogrammes weight, having a fistula of the gall-bladder. The absorption of albumen, hydrocarbons, and fat, was noted, with the following conclusions. *a.* The digestion and absorption of albumen in the form of meat was not interfered with by the outflow of bile. The nitrogenous constituents of the fæces and of the urine were the same in amount as before the operation. A dog fed exclusively upon meat maintained the same proportion also of these constituents. The maximum amount of meat that was given did not affect the flow of bile. *b.* The digestion of grape-sugar was not diminished by the presence of the fistula; the excretion of urea reached as high an amount as previously. An exclusively bread diet was as well digested; while the weight of the animal, and the proportion of nitrogenous elements, were the same as under a mixed diet of bread and meat. *c.* The absorption of fat, on the other hand, was notably affected by the existence of the fistula. Whilst, in the normal condition, 99 per cent. of fat would be absorbed, and only 1 per cent. appear in the fæces; in the fistulous animal, only 40 per cent. was absorbed, and 60 per cent. was voided unchanged. Small quantities even of fat in the food interfered with its digestion; whilst larger quantities caused diarrhœa, borborygmi, and offensive flatus, and the evacuation of fat unchanged. The grey colour of the stools in icteric disorders, the author considers, depends not upon the colouring matter of bile, but upon fatty matters therein contained. Further investigations were carried out upon two more dogs, in which fistula had been established. In one of these the bile was collected every hour, and the amount calculated for the twenty-four hours. In the case of the second dog, the whole quantity that flowed was collected together. With regard to the composition of the bile, it was observed that the proportion of the sulphur and biliary acids varied with the nature of the food, varying from 4·01 to 4·61 per cent. The nitrogenous elements of dry bile varied from 3·7 to 3·9 per cent. The fluctuations of the sulphur compounds were still greater. The proportion and the absolute quantity of solid matter in the bile varied with the amount and time of feeding, reaching the highest an hour afterwards, and depending, it would seem, upon a reflex flow of blood through the filling of the intestine.

1934. *Gréhaut and Quinquaud on the Volume of Blood in the Bodies of Living Mammals.*—M.M. Gréhaut and E. Quinquaud (*Comptes Rendus*, Tome xciv., No. 22; *Centralbl. für die Med. Wiss*, Jan. 13, 1883) describe the following experiment. An animal is made to inhale a measured quantity of carbonic oxide diluted with oxygen. A definite quantity of blood is then drawn, and the amount of carbonic oxide determined. This quantity will afford an estimate of the amount of blood through which the respired carbonic oxide has been diffused. If 100 cubic centrimètres of blood contain 8 cubic centimètres of carbonic oxide, and 64 cubic centimètres be absorbed on the whole, the volume of blood may be calculated from the equation, $8 : 10 = 64 : x$. The amount of carbonic oxide absorbed into the blood is indirectly estimated by the authors by determining the absorptive power of the blood for oxygen, before and after the inhalation of carbonic oxide; the difference gives the equivalent quantity of carbonic oxide that is taken up. The gaseous mixture employed for inhalation consisted of 5 litres of oxygen, 1 litre of hydrogen, and as many times cubic centimètres of carbonic oxide as the weight of the animal was 7·3 kilogrammes. The gas was contained in a glass reservoir, and was administered through a nose-piece. The quantity of the carbonic oxide in the expired gas was ascertained by passing it heated through carbonic acid. From these experiments upon dogs the numbers for their proportion of blood varied from $\frac{1}{13}$ to $\frac{1}{11}$ of the weight of their bodies.

1935. *Helfreich on the Intra-ocular Circulation and the Venous Pulse of the Retina*—F. Helfreich (*Centralbl. für die Med. Wiss.*, March 14, from Gräfe's *Archiv*) says that the venous papillæ of the retina subside during the heart's diastole, and are again immediately refilled at the systole. The conditions of the intra-orbital circulation do not suffice to account for the retinal venous pulse, which must be sought in the peculiarities of the intracranial circulation. The rhythmically augmented influx of blood in the cerebral arteries displaces, by compression, the blood from the cerebral veins, and thereby occasions a simultaneous pulsatile withdrawal of the venous blood. The blood in the orbital veins must be influenced by the fluctuations in the cavernous sinus. The collapse, however, can only affect those veins which lie free in the orbit, and whose walls are not closely attached to the surrounding tissues. These conditions are found in that portion of the vena centralis retinæ which occupies the middle of the papilla. As a matter of fact, the physiological condition of the venous pulse is not that of an alternation between overfilling and a moderately abiding fulness of the venous circulation, but between a moderate fulness and an absolute emptying of the papillary vein. A regular fluctuation occurs in the veins passing out from the choroid, which, it is evident, will not be perceived in retinal veins. The regular fluctuation seen in the veins of the retina is not perceptible in the outgoing veins of

the choroid. This membrane becomes proportionately filled with blood, and its capillaries are then more than usually distended. The simultaneous flow of blood is sufficient to prevent any perceptible diminution in the emissary veins of the choroid during the systole of the heart. Vessels also of the breadth and power of the *vasa vorticosa* suffer change of diameter, difficult to detect in so fine a column of blood as corresponds to that in the retinal veins.

1936. *Kratschmer on the Proportion of Hydrocarbons in the Human Liver.*—Dr. Kratschmer (*Wiener Med. Wochensch.*, 1883, No. 13, and *Centralbl. für die Med. Wiss.*, Oct. 27) estimated the amount of glycogen, sugar, and hydrocarbons from the liver of a criminal (a healthy man, 21 years of age) who had been hung. The organ had been heated for six hours in a 2 per cent. dilution of hydrochloric acid at the temperature of boiling water. Two hundred grammes weight of the liver was removed and preserved in a cool place for repeated determinations at intervals. The following results were obtained.

Hours after death.	Sugar.	Glycogen.	Sum of both reckoned as sugar.	Total of hydrocarbons as sugar.
3	1·66	1·70	3·53	3·56
9	2·00	1·74	3·91	4·16
26	2·17	1·65	3·98	4·09
50	2·17	1·41	3·72	4·16
74	2·00	1·20	3·32	3·90

The quantity of glycogen does not notably diminish during the first twenty-four hours; indeed, some time may be allowed to elapse after death without diminution of the proportion of glycogen. On the other hand, the quantity of sugar and other hydrocarbons increases at first. Besides the above-mentioned case, the proportions of sugar and hydrocarbons have been carefully estimated in a number of suicides, in whom the liver was examined within twenty-four hours after death. In ten instances, from 21 to 31 years of age, Dr. Kratschmer found the proportion of sugar to be from 1·20 to 2·62 per cent.; of glycogen between 0·98 and 3·46 per cent.; and of the entire hydrocarbons between 2·20 and 5·60. In two cases of sudden death from disease of the heart the proportion of sugar was as high as 1·43, while that of glycogen was as low as 0·22 and 0·19 per cent. Both of these substances were diminished in two suicides, one of whom lived four hours, and the other died eighteen days afterwards from pyæmia. The degree of fulness of the alimentary canal did not seem to have any influence upon the amount of sugar or glycogen. The examination of pathological cases gave very variable results. W. B. KESTEVEN, M.D.

1937. *Feuerstack on the Development of Red Blood-Corpuscles.*—Herr Feuerstack gives the following observations as the results of his investigations (*Zeitschr. für Wiss. Zool.*, Band xxxviii., and *Centralbl. für die Med. Wiss.*, July 28). In all animals having nucleated red blood-cells (pigeon, triton, &c.) these undergo transition from colourless to coloured cells. He observed that in forced formation of blood (after repeated blood-lettings) the white corpuscles are at first in excess. In the next place, there appear the forms of globular coloured cells, with large nuclei (hæmatoblasts): these are developed from the colourless cells by transformation of the hyaline cell-body. Gradually these become flattened, while the nuclei are diminished. Thus the change occurs from the white blood-corpuscle with hyaline cell-body and the small nuclei of hæmatoblasts, such as are formed from the colourless cells by forced blood-formation. With reference to the places of these transformations, the author finds that in pigeons the earliest changes are found in the marrow of the bones, in the portal system, and in the medulla of young quills; in the frog, in the medulla of the bones and in the spleen; in the triton and the eel, in the spleen and lymph-sinus of the kidneys. The author further states that in the last-named animals the removal of the spleen (which after a long time is regenerated) does not hinder the formation of the hæmatoblasts. In the pigeon, repeated depletions bleach the spleen, which sometimes is atrophied, sometimes hypertrophied.

W. B. KESTEVEN, M.D.

1938. *Curci on the Action of Morphia on the Circulation of the Blood.*—The author's studies were on the action of morphia as distinct from that of opium, which would appear to differ somewhat in its influence on the circulation. His results are these. 1. Morphia in any dose retards the pulse; that is, renders it more slow and more full from the commencement of its action, the vagi being intact, while it has no influence on it if the vagi are divided; therefore morphia has an exciting action on the centres of the vagi. 2. Morphia does not modify the blood-pressure very profoundly, but in small and medium doses always produces these successive phases, (*a*) short and rapid diminution, (*b*) increase ordinarily above the normal of a certain duration, and (*c*) a definite diminution, not great, for the whole of the narcosis, independently of the cardiac rhythm and with the vagi intact or divided. In doses relatively great, it lowers the arterial pressure with slight modifications. 3 Morphia, the medulla oblongata being destroyed, lowers gradually the blood-pressure, without producing the second phase, that is, increase of the pressure; therefore, morphia has an exciting action on the bulbar vaso-motor centre in the first period of its action. 4 Morphia does not paralyse the great sympathetic (ganglia and peripheral branches), and not at all the vaso-motor centres, even in profound narcosis.

G. D'ARCY ADAMS, M.D.

1939. *Anrep on the Influence of Stimulation of the Splanchnic Nerves on Respiration.*—Dr. John C. Graham, on the ground of some experiments on rabbits, assigned to the splanchnic nerves a specific part in the respiratory act (*Archiv. für die ges. Physiologie*, Band xxv. p. 379). On stimulating the proximal end of the divided nerve by an interrupted current, he found a considerable decrease in the number of the respiratory movements when a weak current was used; a strong current produced complete arrest of respiration in the expiratory phasis. Division of the pneumogastric and sympathetic nerves did not change the results. Lately these experiments have been repeated on rabbits and rats at Professor J. R. Tarkhanoff's laboratory, by Dr. V. K. Anrep. The author (*Vratch*, No. 28, 1882) confirmed Dr. Graham's observations, but at the same time added two new facts: 1, that the stimulation of the splanchnic nerves may produce, also, an acceleration of respiration; and, 2, that in some animals no arrest of respiration follows even the strongest stimulation. The additional facts induce the author to deny any specific significance of the splanchnic nerve for the respiratory act, since the

experiments point to a great similarity, in regard to the influence on respiration, between the splanchnic and sensory nerves. When carrying out the comparative experiments on the sciatic nerve, Dr. Anrep found that the stimulation of the latter gave the same phenomena as those obtained in the case of the splanchnic (including the expiratory stoppage of respiration). The author is inclined to ascribe the influence of the splanchnic nerve on respiration to the presence of sensory fibres.

V. IDELSON, M.D.

1940. *Husson on the Influence of Spices on Digestion.*—The *Wiener Med. Blätter* of Sept. 27 quotes some experiments of Husson on the influence of spices on the digestion of meat. He has carried out his experiments with artificial gastric juice, in which he has placed meat which had lain for four days in wine, vinegar, oil, charcoal, and common salt respectively. The meat which had been immersed in white wine dissolved the most rapidly, that in vinegar, oil, and charcoal just as quickly as fresh meat, while the salt meat was much more difficult to dissolve. He then experimented on the influence of salt, and found that small quantities hastened digestion, but that a larger amount retarded it. Acetic acid seemed to hasten digestion in exact proportion to the dose.

ALICE KER, M.D

DERMATOLOGY.

RECENT PAPERS.

1941. SPENDER.—The Best Treatment of Eczema and of Pemphigus. (*Practitioner*, June.)

1942. REID.—Itch in the Cat. (*Brit. Med. Jour.*, May, p. 992.)

1943. MORRIS.—The Treatment of Lupus Vulgaris. (*Brit. Med. Jonr.*, August, p. 322.)

1944. MORRIS.—The Use of Antimony in Certain Skin-Diseases. (*Brit. Med. Jour.*, Sept., p. 572.)

1945. MORRIS AND HENDERSON.—(*Journal of Royal Microsc. Society*, 1883.)

1946. BADALONI, N.—A Case of Acute Pemphigus. (*Il Morgagni*, Fasc. vii.; *Gazz. Med. Ital. Prov. Venete*, Oct. 13, 1883.)

ART. 1941. *Spender on the Best Treatment of Eczema and of Pemphigus.* Dr. Spender, in the *Practitioner*, June 1883, communicates an able article on some therapeutic points in diseases of the skin. His chief remarks are on eczema and pemphigus. With reference to eczema, Dr. Spender says, we delineate four grades of inflammatory action—(*a*) the powdery desquamation of chronic passive erythema or so-called *pityriasis*; (*b*) the active papillary hyperæmia with enormous exfoliation which constitutes *pityriasis rubra*; (*c*) the serous exudative inflammation called *eczema rubrum*; (*d*) the purulent exudative inflammation known as *impetigo* or *porrigo*. These are all bound together by an obvious pathological link, and ought to be spoken of as dry and moist forms of inflammatory action. The treatment of some cases of weeping dermatitis has been to wrap the affected part in lint or rag, soaked in an astringent lotion and then covered with some impervious covering, thus keeping the part in a bath of its own fœtid secretion. Instead of this, it is recommended to use a lotion composed as follows—oxide of zinc, half an ounce; calamine, four scruples; glycerine, an ounce; lime-water to seven ounces. Strips of linen rag are to be soaked in this lotion, and to be carefully adjusted to the affected part, and gently bandaged over with a calico bandage of open texture. This process may be done night and morning at first, but it soon becomes necessary to change the dressing less frequently. Dry patches of chronic dermatitis, clearly eczematous in origin, are curable by the application of tar if it be used sparingly. If the merest morsel of tar ointment be added to chalk ointment, it has a marvellous effect on the infiltration and scaliness of an old dry dermatitis. Dr. Spender then goes on to speak of pemphigus, as an essentially neurotic disease. The treatment most to be relied upon is by applying local remedies, such as a combination of vaseline and lead ointment, and subsequently a little dilute nitrate of mercury ointment. At the same time tonics, such as iron and arsenic, should be given. In conclusion, Dr. Spender adds that, for the drier forms of dermatitis, bathing two or three times a week in the Bath waters is highly beneficial, and forms a valuable auxiliary to specific medicines, by conferring on the skin a new nutritional power.

1942. *Reid on Itch in the Cat.*—Mr. J. Reid, in the *Brit. Med. Jour.*, May 1883, p. 992, writes concerning a cat that died of itch. The animal was greatly emaciated. The hair on one side of the face and neck was matted so as to resemble one large scab. The itch-insect and eggs were detected in large numbers. The cat's liver contained many abscesses of the size of a pin's head; the lungs, &c., appeared to be normal. Mr. Reid asks, Does the cat infect children, or do the children infect the cat? Or is there mutual infection?—[In the *Medical Digest*, Sect. 557 : 6, reference is made to the fact that contagious diseases are propagated in some cases by domestic pets—*Rep.*]

1943. *Morris on the Treatment of Lupus Vulgaris.* Mr. Malcolm Morris, in the *Brit. Med. Jour.*, August 1883, p. 322, quotes from *Erichsen's Surgery*, 1869:—'In the more rapidly spreading and worst forms of lupus excedens, nothing can be done beyond the relief afforded by the administration of opiates.' The object of the paper is to show how by means of scraping, or erosion, and scarification, a complete revolution has taken place with regard to the prognosis of lupus. In many cases, scarification is better than scraping, the latter being more painful, and leaving a deeper scar. Scarification, though tedious, is not painful. Mr. Bickersteth, of Liverpool, says he has lately employed antiseptic dressings, in the form of liquor calcis bisulphatis, on lint covered with waterproof tissue, with good results.

1944. *Morris on the Use of Antimony on Certain Skin-Diseases.*—Mr. Malcolm Morris, in the *Brit. Med. Jour.*, September 1883, p. 572, brings forward the use of antimony in the treatment of diseases of the skin. The preparation used is tartar emetic or tartarated antimony, the largest dose given being $\frac{1}{32}$ of a grain or 7½ minims of the wine. In eczema, in the majority of cases, marked and rapid benefit has been obtained if the case is acute; in the chronic forms, especially when localised, the use of antimony is less often successful. In one form of erythema which the author calls relapsing erythema, and which resembles erysipelas, but there is no rise of temperature, the use of antimony proves very efficacious. In cases of prurigo, three or four minims of the wine, continued over a long period, allays the itching to a great extent; it may be continued for over a year without causing sickness or

diarrhœa, but on the contrary the appetite improves and weight increases. In a few cases of chronic urticaria, and in some cases of psoriasis in which arsenic does not agree, antimony has proved beneficial. The dose given varies from $\frac{1}{240}$ to $\frac{1}{32}$ grain according to age. RICHARD NEALE, M.D.

1945. *Morris and Henderson on the Ringworm Fungus.*—Morris and Henderson (reprint from *Jour. of Microsc. Soc.*, 1883) succeeded in cultivating the ringworm fungus in sterilised gelatine peptone, and found that the spores gave rise to a branching mycelium, septate-bearing basidia and sterigmata, and identical with those of penicillium. The spores of the second generation reproduced ringworm on the human skin. ROBERT SAUNDBY, M.D.

1946. *Badaloni on a Case of Acute Pemphigus.*—Dr. Badaloni narrates (*Il Morgagni*, Fasc. vii.) a case of acute pemphigus in a girl, aged 14, greatly reduced by prolonged suppuration. The fever lasted nine days with evening exacerbations, the temperature frequently rising to 40° C. (104° F.). The urine was scanty, and contained albumen, uroerythrin, urophein, and uroxanthin. The examination of the liquid contained in the bullæ of the blood and urine did not show the presence of ammonia, which, according to Bamberger, exists in great abundance in the blood of individuals suffering with pemphigus. The author holds with Professors Cantani and Barduzzi, and to a certain extent with Bärensprung, who admits an alteration of the blood as the basis of the disease, that pemphigus belongs to the infectious diseases. It has all the characteristics of this class of disease—prodromal period, splenic tumour, febrile course, cephalalgia, anorexia, adynamia, &c.

G. D'ARCY ADAMS, M.D.

REVIEWS.

ARTICLE 1947.

Sexual Impotence in the Male. By WILLIAM A. HAMMOND, M.D., Surgeon-General U. S. Army, Professor of Diseases of the Mind, &c., in the New York Post Graduate Medical School; President of the American Neurological Association, &c. New York: Bermingham & Co. 1883.

ANYTHING from the pen of Dr. Hammond deserves, as a general rule, the attention of the profession; but this book on sexual impotence is scarcely worthy of his reputation. The 274 pages of which it consists are largely made up of extracts from authors, from Hippocrates downwards, and of reports of cases, many of the details being of the most revolting character. Instances of more or less decided sexual impotence are doubtless common enough, and the treatment of such cases is always difficult and often ineffectual; but the practitioner would scarcely be aided by a perusal of the details of the disgusting practices to which the condition is sometimes due, and which Dr. Hammond describes with nauseating prolixity. He devotes, for example, no fewer than eight pages to a description of certain creatures in Mexico, who are rendered impotent and then used for the most abominable purposes. There is, however, very little that is really new in this book; and as much information as to the causes and treatment of impotence will be found in any good text-book on medicine. Dr. Hammond is a believer in the efficacy of phosphorus as a nerve-tonic, and he prefers the phosphide of zinc to any other preparation. He has seen a case of atrophy of the testicles as a result of large doses of bromide of potassium, but no instance of the kind after long-continued use of the iodide. Dr. Hammond proposes, at some future time, to enlarge the scope of his book, so as to include the subject of sterility, and to consider the two affections as they occur in men and women. If he carry this intention into execution, it is to be hoped that he will considerably diminish the size of his work, and omit a large proportion of the very unnecessary details. ALFRED COOPER.

ARTICLE 1948.

The Dissector's Manual. By W. BRUCE-CLARKE, M.A., M.B., F.R.C.S., Senior Demonstrator of Anatomy and Operative Surgery at St. Bartholomew's Hospital; Examiner in Anatomy to the University of Oxford; Surgeon to St. Peter's Hospital; and Assistant-Surgeon to the West London Hospital; and C. B. LOCKWOOD, F.R.C.S., Demonstrator of Anatomy and Operative Surgery at St. Bartholomew's Hospital, and Surgeon to the Great Northern Hospital. Illustrated with 49 engravings. London: Cassell & Co. 1883.

THIS manual is the work of two experienced demonstrators who have observed that, when dissecting, the student spends the greater part of his time in seeking for anatomical structures, whilst he generally relies upon systematic works on anatomy for complete descriptions of bones, muscles, vessels, and nerves. Hence the authors have given unusually full directions for the exposure of the various structures to be found in each anatomical region, but have, for the most part, omitted minute and systematic details, which few students have the time or inclination to consider when engaged in dissecting their parts. In the hands of many students, some of the more complete works on practical anatomy are worse than useless; the formidable array of matters of detail frightens them, and, if industrious, they cannot complete their minute dissections before the subject is removed from the dissecting room. Messrs. Bruce-Clarke and Lockwood have, in their manual, succeeded in causing practical anatomy to appear palatable to the average student. We are glad to find that full importance is given to the surface-markings and to visceral anatomy. The more useful of the diagrams which adorn the manual, refer to the relations of viscera to the surface of the body and to bony landmarks. The precise position of an organ is a matter only to be learnt by long and careful practice, and its clinical application requires still more experience. It is right, however, that the student should begin with as correct ideas as possibly can be instilled into his mind and memory by a teacher or by a teacher's treatise; and, after Horace's principle, Messrs. Bruce-Clarke and Lockwood have found that long conversation and printed paragraphs on peritoneal folds and the position of the kidneys cut less deeply into the hearts of young dissectors than do other methods of instructions where the eye, less easily wearied than the ear, and a better handmaid to memory, is brought into use. The chapter on the use of instruments is very good; in a future edition the glossary ought to be made far more complete, with cautions against anatomical solecisms and errors, which the authors have avoided; thus they rightly speak of the 'hilum' of the kidney, and

make use of the English term 'skull-cap' instead of 'calvaria,' which sometimes signified the entire skull, or 'calvarium,' which was the Latin for a kind of mullet, but was never employed by the ancients as a name of any part of the cranium.

ALBAN DORAN.

NOTES ON BOOKS.

ARTICLE 1949.

Ferris, Boorne, Townsend, and Boucher's (Bristol) *Wholesale and Export Price Current.*

THIS is a very comprehensive catalogue of 132 pages, likely to be useful to all branches of the profession. The first section comprises pure drugs, chemicals, pharmaceutical preparations, and dietetic articles, amongst which will be found the preparations belonging to the firm, and American eclectic remedies. Next follow domestic and dietetic articles, and a considerable space is devoted to surgical instruments, appliances, and sundries. Part III. contains a full list of pills, coated and uncoated; the formula of many being chosen from the various leading hospitals. Special preparations and American fluid extracts are attached to this section, as well as some useful information relating to the Indian parcel post, rates of books, &c.

Forty-five pages of letterpress are assigned to 'Notes on New Drugs' and recently introduced remedies, and form a valuable addendum to the work. A copious index is also added, and prices are attached to each article. To the professional resident abroad this pamphlet will be very useful, as it is one of the most extensive published; and the high position attained by Messrs. Ferris & Co. induces confidence in their statements as to the perfection of preparation of the various therapeutic agents catalogued and described in their lists.

ARTICLE 1950.

Messrs. Baiss Brothers & Co.'s (Jewry Street, London, E.C.) *Quarterly Export Prices Current.*

WE have received this pamphlet, which is of its usual complete character. Part I. comprises an exhaustive list of drugs, chemicals, &c., with a useful appendix devoted to bonded goods. A notable feature in this section is the market report, and a table headed 'Higher' and 'Lower,' enumerating those drugs that have advanced or receded in price. Part II., devoted to sundries, is profusely illustrated, and contains, amongst others, a list of patent medicines and proprietary articles, with a special list of those sold at net prices for cash. Messrs. Baiss Brothers' list, appearing at short intervals, forms one of the authorities most to be relied on as to market prices.

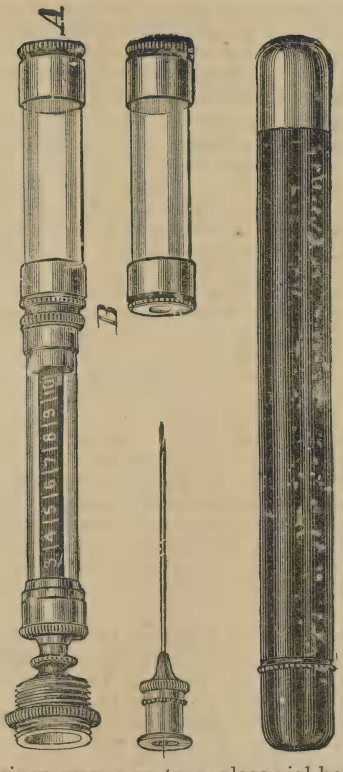
MEDICAL OFFICERS OF VOLUNTEER CORPS IN INDIA. The Government of India do not consider it necessary to lay down any rules for the examination of medical officers of volunteer corps, as they hold only honorary positions in their corps, and are not enrolled, and consequently they are ineligible for the capitation-grant. The Government appear to have been misinformed on the point, as many honorary surgeons are enrolled members of volunteer corps in India, but possibly the decision may have reference to the special, not ordinary, capitation-grant.

NEW INVENTIONS.

ARTICLE 1951.

DR. GRANT'S IMPROVED HYPODERMATIC SYRINGE.

THE illustration shows this syringe, in and out of case. The syringe is of superior glass with nickel plated metal fittings, and holds when full, just ten (10) minims of water. All the metal caps have leather washers and screw on to metal threads, which are cemented on to the glass tube. The glass tube is of extra strength and quality and has a *uniform bore.* The piston is of the dumb-bell variety and fits accurately in the glass bore. The piston-rod, upon which are marked the graduations, is made much larger than usual, in order to insure *an easy and steady action* when administering an injection. The needle, which is made of the finest blocked steel, fits into the top of the piston-rod, when not in use. A litle vaseline placed in receptacle for needle will prevent rusting.



The syringe screws on to a glass vial holding ten minims of fluid, and should always be full and attached when not in use, for by this means the leather packing is kept moist and in good working order.

Both syringe and vial fit into a hard rubber case and thus can be carried in vest pocket the same as a clinical thermometer. At the bottom of the case is a receptacle for holding hypodermatic globules.

The directions for use are as follows. Unscrew the button A and draw up the water; drop in a globule, replace the button, and agitate the contents of the vial until a complete solution is effected.

Before charging the syringe reverse the screw at B, slightly push down the piston-rod; this gives vent

to contained air and forms a partial vacuum. Now, screw tightly at B and charge the syringe—then remove the phial and attach needle, when the instrument will be ready for use. The syringe may be procured of William R. Warner & Co., Philadelphia; and of Messrs. F. Newbery & Sons, 1 King Edward Street., Newgate Street, E.C.

MISCELLANY

THE first clinical laboratory in Sweden has recently been opened at the Upsala University.

CHOLERA COMMUNICATED BY WASHING.—At the meeting of the Royal and Imperial Society of Physicians at Vienna on Oct. 19 (*Wien. Med. Blätter*, Oct. 25), Professor Drasche gave some information regarding the spread of cholera by means of washing; three laundresses in a laundry in Dornbach having fallen victims after washing clothes from hospitals in Vienna, where sporadic cases of cholera had occurred.

A SET of rules regulating the mode in which medical instruction is to be imparted to women in local colleges, and setting forth the terms upon which females are to be admitted to medical degrees, has been published under the authority of the Bombay Government.

HOSPITALS IN THE PUNJAB.—The Lieutenant-Governor of the Punjab, in reviewing a report on dispensaries in the province, has expressed his great regret to learn that the subscriptions to medical institutions, received from natives of the Punjab were last year discreditably small. Excepting a liberal donation of 5,000 rupees, given by the Maharajah of Kashmere to the Mayo Hospital at Lahore, and the contributions of the native chiefs to the Ripon Hospital at Simla, the total receipts, in the shape of native subscriptions, amounted to the insignificant sum of 4,988 rupees. In a country, says the official resolution, where charity for the relief of paupers is proverbial, it seems astonishing that such niggardly contributions are made towards the support of institutions, the value of which is increasingly felt by all classes of the community. Government officials are enjoined to exercise their influence in this most legitimate direction. The Lieutenant-Governor notices the excelledt work done at the Mayo Hospital, where the large number of successful operations 'reflects credit on the Professor of Surgery, Surgeon E. Lawrie, M.B.' Listerism was carried out whenever possible, and the very small mortality from septic causes sufficiently shows the efficacy of the system, and the skilfulness with which it was applied.

DOWNWARD DISPLACEMENT OF THE TRANSVERSE COLON.—At a meeting of the Philadelphia County Medical Society in October last, Dr. C. H. Thomas reported three cases of downward displacement of the transverse colon with necropsies. He stated that during the illness of the patient the actual conditions had not been recognised; it was in every case the cause of death. Dr. Albert Smith, who had been in consultation, thought that, if a correct diagnosis could have been made out, the elevation of the hips might cause the colon by gravity to return to its proper place. Professor Roberts Bartholow said that downward displacement of the transverse colon should be divided into congenital and acquired. He had seen cases of both forms during his service in the Medical Department of the United States Army, and that the condition was not uncommon, especially the congenital displacement. Dr. O. H. Allis reported an interesting case of downward displacement occurring in his practice.

DIAGNOSTIC VALUE OF UTERINE HÆMORRHAGE AFTER THE MENOPAUSE.—In a recent clinical lecture Dr. Gaillard Thomas stated, as an axiom in gynæcology, that, if a woman who has normally ceased to menstruate begin to have uterine hæmorrhage, one should always suspect carcinoma. 'Not unfrequently you will see in the medical journals the reports of cases where women who have passed the change of life have begun to menstruate regularly again; but, such accounts are altogether deceptive, and if these cases could be followed out it would be found, with scarcely a single exception, that the uterine flow was merely the indication of the presence of malignant disease. In other words, there is absolutely no such thing as a return of the menses when a woman has once reached the normal menopause. Not long since a patient of mine in the Woman's Hospital, who is sixty years of age, began to have a flowing from the uterus; and as there was no indication of any external disease I applied the curette to the endometrium, and drew out some pulpy masses, which I sent to a well-known microscopist for examination. The report that I got from him was that the growth was not malignant in any respect, but was simply a form of polypus. I am perfectly sure, however, that the microscopist is wrong, and for this reason; in the uterus of a woman of sixty polypi never develop. The organ at that age is completely atrophied. Sometimes, in women who have passed the menopause, you will find uterine tumours which have all the appearance of fibroids. They are not by any means fibroids, however, but sarcomata.'

THE ACTION OF DISINFECTANTS ON TUBERCULAR MATERIAL.—Dr. Vallin (*Tribune Méd., et Jour. de Pharm.*, 1883, p. 221) has endeavoured to determine in what degree the inoculability of tubercle is modified by the previous exposure of the tubercular material to reputed disinfectants. Fragments of tubercle from a patient who had died of phthisis were found to yield an infusion powerfully infective. The infusion, dried upon blotting paper, was also infective. Similar strips of prepared paper, after being subjected to sulphur fumigation, were found to be inert when the sulphur used was in the proportion of 30 or 40 grammes to 50 cubic mètres of air; but with 20 grammes of sulphur the results were not constant; and with 15 grammes of sulphur the strips still yielded specific inoculable material. Experiments were also made with other disinfectants. One part of corrosive sublimate in 1,000 parts of water was effective, as were also nitrous vapours. Water appeared also to have the property of destroying germs; for, if the strip of paper on which the tubercular infusion had dried was disinfected with water, the inoculated animal retained its health.

THE PRESENCE AND BEHAVIOUR OF CERTAIN FERMENTS.—Dr. A. Baginsky (*Zeitschr. für Phys. Chem.*, Band vii., and *Centralbl. für die Med. Wiss.*, Sept. 29) submits the following propositions. 1. He confirms the statement of Würtz that pepsin ferment exists in artichoke flowers, and has found it also in dried figs, and in the extract of Carica-papaya (Papain), but does not find it in Drosera rotundifolia, Dionæa muscipula, and many other plants. 2. As to the presence of pepsin ferment in the small intestines. This was obtained from the dried mucus of the small intestines of the calf, by the means of solutions of soda, and of diluted hydrochloric acid, and by glycerine. Milk was coagulated in fifteen minutes by the hydrochloric extract; in the soda extract, after sixty minutes; and in the glycerine extract after twenty-eight minutes. 3. The most favourable temperature for the action of the pepsin was from 33° to 50° C. (91° to 122° F.). At 60° C. (140° F.) coagulation is arrested. 4. In fluids containing bacteria, when mixed with milk, no coagulation takes place, even when strongly acidulated. The peptic ferment is so far influenced by decomposition, that it is arrested by the development of an alkaline reaction. 5. Pepsin may be separated from dry small intestine, by hydrochloric acid and glycerine, and is destroyed by decomposition. 6. The author finds no peptic ferment in watery pancreatic extract. The statement of Langley respecting the decomposition of peptic ferment by trypsin; also that of Kühne, as to the decomposition of trypsin bypepsin; are confirmed by Dr. Baginsky.

The London Medical Record.

Article 1952.

LEUBE ON THE IMPORTANCE OF CHEMISTRY IN MEDICINE.*

The fundamental quality of the human organism consists in its assimilation of materials from without, which are broken up in the body, thus eliminating their energy and maintaining the functions necessary to life. The changes that these force-producing substances undergo in the organism from their ingestion to the discharge of their waste-products therefrom, constitute its material exchanges. Now, to investigate these processes, it is self-evident that the help of chemistry is essential; and not only is this the case in physiological, but also in pathological conditions, for the fundamental laws are the same in both states, although in the latter the conditions are somewhat altered.

The chemical knowledge of the ancients was of a most rudimentary kind, although the works of Hippocrates indicate some acquaintance with the connection between the food taken and the animal heat; while Galen, in his remarks on respiration, compares the blood to the oil of a lamp, and the heart to its wick.

For over a thousand years from Galen's time, no progress was made in animal chemistry, and not till the sixteenth century were the fetters that had hitherto bound medicine in darkness burst asunder by the instrumentality of such men as Vesalius, Servetus, and Harvey. Then came Paracelsus, impressed with the notion of the alchemists that all the metals consisted of combinations of sulphur and mercury, declaring that the human body was made up of a mixture of sulphur, mercury, and salt; and that, when these constituents were harmoniously blended, the body was in a state of health, but when otherwise, disease was the result. Stimulated by these teachings of Paracelsus, the *iatro-chemical* tendency in medicine sprang into life, and exercised sovereign sway for upwards of a century, two of its most prominent disciples being Van Helmont and Sylvius. Van Helmont distinguished six ferments as taking part in digestion; and Sylvius taught that fermentation was the fundamental principle of all the changes in the animal organism: a fermentation, too, attended often with an effervescence due to the confluence of acids and alkalies—a predominance of the acids occurring in most febrile disorders, and of the alkalies in the plague and most malignant fevers. Upholders, more or less, in the seventeenth century of some of these chemical doctrines, were Willis, Borelli, and Sydenham; and yet, with all their errors, it must be given in their favour that they were animated by the notion that, without chemistry, a true explanation of the differences between a sound and an unhealthy organism was impossible, and that such a knowledge was the only safe foundation to build upon. Robert Boyle (1627) was almost the first chemist to whom the finding of the philosopher's stone was not the essential aim of chemistry, and his work justly entitles him to be regarded as the founder of modern chemistry as one of the exact sciences; and from his time to that of Stahl, professor of medicine at Halle and the first chemist of his day, the union between chemistry and medicine became closer. As agents in effecting this result may be named Boerhaave, Priestley, and Lavoisier, and as ardent disciples in making practical application of their discoveries Morgagni, Laennec, Bichat, and Magendie. This close connection between chemistry and medicine was followed by a decided advance in pathological anatomy and physical diagnosis—a healthy and sound reaction after such a long period of tradition and speculation; and in assisting to bring this about, and to establish medicine on a more scientific basis, a physiologist of great repute in the first half of the present century (Johannes Müller) deserves to be mentioned with respect and gratitude.

As anatomy and histology form the basis from which physiology has sprung, so the physiological perception of the morbid processes of the body presupposes an exact knowledge of the anatomical relations of the organism and of their alterations. Yet not less does the investigation of the morbid processes from the physiological standpoint demand the referring back of the results obtained to the laws of physics and chemistry. For the future, indeed, an exclusively pathologico-anatomical, or a purely physical and chemical tendency in medicine, is impossible; to be in consonance and harmony with nature, the ruling influence must be physiological. With this limitation, however, there falls to chemistry a most important part in the fathoming and clearing up of the facts of pathology, and in the testing of the general bearing of medical theories.

To indicate some of the debts that modern pathology owes to chemistry, and thus to point out some of the ways by which the medicine of the future may be extended and enlightened, it will suffice to enumerate and consider a few of its most important contributions. Two processes of the living organism which are of special interest both chemically and medically are those of digestion and urinary secretion. And first as to digestion. About the middle of the last century, Réaumur made the discovery that the stomach secreted a juice that dissolved the food; and his researches, as well as those of Spallanzani, established the fact that digestion was not a simple mechanical process, but really a chemical one. The normal acidity of this juice was later ascribed by Prout to hydrochloric acid; and, later still, T. Schwann discovered the pepsin, and assigned to it its ferment-action. Next came the investigation of the peculiar soluble bodies resulting from the gastric digestion of albuminous bodies which must be regarded chemically as hydration albumin products. This digestive process, it was next found, was interfered with or arrested when the proportion of acid was reduced, or when an alkaline reaction made its appearance; and the same occurred when the pepsin or peptones were precipitated by the entrance into the stomach of strong alcohol, or of the salts of the heavy metals, or of concentrated solutions of the salts of the alkalies; whilst the presence of such bodies as dilute solutions of soda, alkaline mineral waters, and saliva rather assisted the secretion of the gastric juice. Processes of decomposition and fermentation were also found to be arrested in the normal stomach. Now it is of the

* Ueber die Bedeutung der Chemie in der Medicin. Von Prof. Dr. Wilhelm Leube.

highest importance, in cases of gastric disease, to know whether the secretion of the hydrochloric acid or of the pepsin is absent, or imperfect, or hindered in any way; this last, indeed, being the common condition in all severe forms of dyspepsia, and generally leading to abnormal fermentations, such as the butyric, in the stomach. The indication in such cases is therefore the avoidance of foods liable to undergo fermentation, and the temporary assistance of the digestive powers by the administration of hydrochloric acid and pepsin during the period of digestion. Besides the pepsin, Hammarsten has lately described other normal ferments in the stomach, which are concerned in the precipitation of the casein of milk and in the conversion of milk-sugar into lactic acid. It is extremely probable that the absence of these bodies in diseased conditions may account for some of the anomalies occasionally noticed in the digestion of milk and milk-sugar—foods that are so important for children and for the sick room.

In digestive power, the pancreas occupies a very high place. Three ferments are secreted by it for the digestion of the three great types of the food-stuffs—the albumins, the fats, and the carbohydrates. But the pepsin of the gastric juice and the trypsin of the pancreatic juice, while both peptonising albumins, do not act harmoniously together, for one destroys the other if brought into contact; so that, if we wish to assist a weakened digestion, the pepsin must be introduced into the stomach, and the pancreatic ferments into the rectum in the form of a finely minced mixture of the not too fresh pancreas and of beef, and left there to digest. In this way it is possible to sustain and prolong life when no food enters by the ordinary portals.

Playing a part in digestion not less important than that of the pancreas, is the liver. Not only is it the seat of the formation of bile, but also of glycogen, and probably also it is a large factor in the construction of urea. As pointing to the biliary pigments being derived from the hæmoglobin of blood, we have the identity between the hæmatoidin-crystals of blood-clots and the chief of these pigments, bilirubin. But in acute atrophy of the liver the normal decompositions do not occur; and urea, the chief terminal decomposition-product of albumin, may be greatly diminished in the urine, or may disappear. The consideration of this body urea, however, brings us into the region of the renal functions, in which discoveries of the utmost moment to medicine have been made by chemistry.

No field, indeed, has been more diligently laboured than the chemical investigation of the urine. Its most important constituent, urea, was discovered in 1799 by Cruikshank, and it was synthetically prepared in 1828 by Wöhler, the first instance of an organic or so-called animal product being directly produced from inorganic constituents, and thus paving the way between organic and inorganic nature. Then we have the discovery of uric acid by Scheele, of lactic acid by Berzelius (1807), and of kreatinin by Liebig (1847); and Wöhler's observation that the alkali salts of the vegetable acids were oxidised in the animal body, and appeared as alkaline carbonates in the urine, rendering it alkaline. More and more urinary constituents were gradually added to those already known, and new facts discovered; probably the most important of the more recent ones being the detection in the urine of certain aromatic products of the decomposition of albumin derivatives of indol, skatol, and phenol, generally combined with sulphuric acid as compound ethers. The quantitative estimation of the normal urinary constituents followed rapidly upon their qualitative determination, and it was soon found that they varied greatly in diseased conditions: the urea, for example, being markedly increased in fevers and diabetes, proportionally lessened together with other urinary constituents in uræmia, and sinking to a minimum or even to zero in acute atrophy of the liver. Soon also it was discovered that in diseased conditions certain bodies made their appearance in the urine which were absent from the normal urine, or only present in minute proportion, such as albumin, grape-sugar, bile, hæmoglobin, leucin and tyrosin, &c.; and it was noticed that they accompanied and were more or less diagnostic of certain diseases, such as diabetes, kidney-disease, hæmoglobinuria, &c.

As to the origin of some of these urinary constituents, we are now in a position to assume with probability that they are derived from the decomposition of albumin in the organism. This body splits up into two groups, one of which belongs to the aromatic, and the other to the fatty series. To the former pertain phenol, indol, hippuric acid, and tyrosin; and to the latter, leucin, aspartic acid, and hypoxanthin. When such bodies as leucin and tyrosin appear abundantly in the urine, it is now found that the formation and excretion of urea have ceased in whole or in part; and also that an enormous increase of indican in the urine attends the intensified decomposition of albumin that occurs when the small intestine is impervious, or occasionally in certain febrile diseases resulting from septic infection.

So far as the respiration is concerned, it has been found that, while with respiratory derangements the excretion of carbonic acid is not at all diminished, the excretion of urea is markedly increased. According to our present views as to the decomposition of nitrogenous substances in the body, it appears at first sight rather a paradox that, as a result of the deprivation of air, an undoubted decomposition of albumin into nitrogenous and non-nitrogenous bodies, occurs, a sufficiency of oxygen being found in the system to complete the oxidation.

A very disputed point in physiological chemistry has been Liebig's dictum, that the amount of tissue change in a given time is proportioned to the nitrogen in the urine; in direct opposition to which is Voit's statement, that in muscle-work there is little or no increase in the decomposition of albumin in the body or in the excretion of urea by the kidneys; on the other hand, that working men absorb much more oxygen and excrete much more carbonic anhydride and water than men in a resting condition.

The consumption of oxygen is not the direct cause of the tissue-changes in the body; rather it is probable that in the living cells themselves resides the power of absorbing oxygen and producing carbonic acid, and otherwise causing a breaking down of food-stuffs in their activity, as to the *modus operandi* of which, however, we are still in the dark. We know that the activity of yeast cells in the fermentation of sugar is intensified by the presence of such an agent as tannic acid, but hindered or stopped by such bodies as phenol, thymol, alcohol, &c. Arguing from these and other data, it may therefore be possible to modify the activity of the cells in the living organism, evidence of which we have probably in the retarding influence exerted by quinine and morphia on albu-

min-consumption, or in the accelerating influence of elevated bodily temperature, sodium chloride, and borax upon the decomposition of the same substance. Further, the tendency of the altered tissue-consumption shows itself especially in the increased destruction of fat through sustained muscle-work, continued stimulation of the organs of sense, and the action of cold upon the skin. More profound disturbances of these specific cell-activities are manifested after certain poisons, and in a few severe functional disturbances of the body. Under the influence of phosphorus-poisoning, for example, there ensues a greatly increased decomposition of albumin with a correspondingly increased elimination of nitrogenous waste products, the inability of the over-stimulated cells further to dispose of the albumin soon showing itself in the diminished consumption of oxygen and exhalation of carbonic acid, as well as ultimately in the fatty degeneration of the cells themselves. In fever, also, an increased consumption of the albumins has been clearly established; this apparently not being the case, at least to the same extent, with the non-nitrogenous stuffs, although the consumption of oxygen and elimination of carbonic anhydride show an evident increase. In diabetes mellitus, a completely perverted tendency in the tissue-changes declares itself; for, while there is a marked increase in the consumption of albumin and fat, yet the capacity of the cells for burning up and thus disposing of the sugar directly or indirectly derived by them from the food, has in great degree disappeared in spite of the enriched supply of oxygen. Obesity also seems to be due to a perverted tendency in the exchanges and processes occurring in the tissue-cells, an altered condition that may become implanted, and even perpetuated from generation to generation.

No part of modern pathology is more interesting than the investigation of infectious diseases, in which micro-organisms play an essential part; although the mode of action of these organisms in the body, and the nature of each individual manifestation, have still to be cleared up. The mechanical crowding of the tissues with these bodies, and the consequent irritation thus induced, are of themselves insufficient to account for all the signs and symptoms manifested; indeed, the severity of the infection is by no means always in proportion to the number of these organisms present, and the keenest microscopic investigations have failed to detect them in the secondary inflammations of different organs frequently met with in these diseases—a fact which compels us to the supposition that the organisms in question really act by virtue of a ferment-working virus of some kind which accompanies them, and is generated by them directly or as the result of their specific irritation or presence in the tissue or its secretion, abnormal or otherwise; and this, it is obvious, is more or less a return to the chemical theory of Liebig, the septic poison being material that has undergone change from contact with something else in a state of change. Septic bacteria, it should be remembered, when thoroughly washed, are deprived of all toxic properties without their life-activity being interfered with.

Just as the process of fermentation is not continuous, but has a natural limit in spite of the still active yeast cells, so in infectious diseases a limit is likewise reached. In the former case, we have reasons to believe that the very alcohol formed by the agency of the yeast cells is the means whereby their future activity after a certain point is arrested; and as the result of the latest investigations we have learned that phenol—a body long known as an antiseptic—is one of the products of the ordinary decomposition of animal and vegetable substances; and, further, that in closed vessels the decomposition of gelatinous solutions ceases after a time; it would therefore appear probable that even as the result of decomposition itself certain antiseptic products make their appearance, and hinder the further continuance of the process. And this is so much the more likely in that, in addition to the phenol, there are yet other products of decomposition, such as kresol, indol, and phenyl-acetic acid, which act in the same way in opposing its progress. What more likely, then, than that among the very products themselves of these infective spores, or of the irritation induced by them, some special one may make its appearance, and, in doing so, stop any further action on the part of the organisms, thus explaining the cyclical course and termination of these infectious diseases?

All this brings us back to the domain of chemistry; and we may therefore express the hope that by the further investigation of the chemical properties of these infectious spores, and of the altered tissue-changes excited by them, we may succeed on the one hand in acquiring a closer acquaintance with their mode of action on the human organism; and, on the other, discover chemical agents fitted in the sense indicated above to overcome the terrible power of these micro-organisms in the bodies they have brought under their evil influence.

The last consideration naturally leads us into a domain of medicine in which chemistry from the earliest period has played a most important part—namely, therapeutics. In the latter half of the fifteenth century, we find Basil Valentine prescribing vegetable and mineral products, in the belief that 'while for the healthy organism they might act as poisons, they were often wholesome medicine for the diseased one.' Paracelsus, too, did much with his chemical preparations of mercury and antimony, and sought diligently for 'quintessences' in his vegetable extracts and tinctures. Willis, also, we read of in the latter half of the seventeenth century experimenting with his chemical drugs upon animals, to discover their action upon the organs and their functions. Passing over the last century we arrive at the present, in the early part of which a notable advance was made in therapeutics under the influence of Magendie's experiments. In Pellétier's laboratory likewise much good work was done, resulting in a more exact acquaintance with the alkaloids, quinine, morphia, and veratrin, &c.

In yet another direction chemistry promises much. By the investigation of the molecular constitution of different bodies, it begins to be seen that a distinct connection exists between their specific atomic grouping and their physiological action. When a series of such bases as chinolin, conia, nicotin, &c., are compared, it is found that their physiological activity is nearly proportional to the amount of hydrogen contained in them. The number of atoms in the molecule, as well as its complexity and degree of stability, appear also to exert an important influence. As an example, let us take salicylic acid ($C_6H_4.OH.COOH$). This body has a constitution similar to phenol ($C_6H_4.H.OH$), but with a carboxyl group in place of one of hydroxyl: on account of this analogy, we might assume that

salicylic acid must possess certain antiseptic properties in common with phenol; and it has been proved not only that it is antiseptic, but that it possesses, in addition, antifebrile properties, as exemplified strikingly in acute rheumatism. Benzoic acid (C_6H_4.H.COOH) likewise is closely allied to salicylic, as the latter may be regarded as oxybenzoic acid; like it, also, benzoic acid is a valuable therapeutic agent in acute rheumatism.

A word or two on quinine before concluding. There is reason for believing that in its complex constitution an atom group is present in the form of chinolin (C_9H_7N); and there are different hydrated chinolin bases, especially the hydro-chinolin derivatives in which methyl or ethyl groups are united to the hydrogen, whose action resembles that of quinine—one of these, for example, kairin ($C_9H_6H_8$.OH.N.CH_3), or oxychinolin-methyl-hydride, is a more intense febrifuge even than quinine itself; indeed, in this body we possess the true type of an antifebrile remedy.

T. Cranstoun Charles, M.D.

Article 1953.

MARSHALL ON NERVE-STRETCHING FOR THE RELIEF OR CURE OF PAIN.

In the *Brit. Med. Jour.*, Dec. 1883, p. 1173, is published the Bradshaw Lecture delivered by Mr. Marshall at the Royal College of Surgeons. The subject chosen was the operation of nerve-stretching for the relief or cure of pain. The first thing insisted upon is that by nerve-stretching it must be understood that a nerve must not only be lifted out of its bed in the body, but that it must undergo a palpable stretching. A table is given showing the degree of extensibility of nerves. This extensibility is not very great; a nerve stretches more than a tendon, but much less than an artery. The longer the nerve, the greater is its elasticity, and the greater amount of stretching it will bear. A living nerve will stretch far more than one dead. Another point also shown was, that the recoil of a nerve after stretching is more marked in a living than in a dead nerve. The amount of weight which a nerve will bear before it breaks is very remarkable. A safe strain for a healthy sciatic nerve in man is 60 lbs.; if the nerve be diseased, 30 lbs. Diagrams are given representing microscopic sections of nerves, before and after stretching. These interesting observations were made by Mr. Horsley at the author's instigation. On examining longitudinal sections of nerves, it is seen that the epineurium in the unstretched specimen is composed of wavy fibres like elastic tissue, and that the tubules lie loose in their sheaths; whereas in the stretched specimen the epineural fibres are found in perfectly straight lines, and the tubules are seen to be narrowed and stretched to an extraordinary degree. When transverse sections of an unstretched nerve are examined, the perineurium is seen loose around each fasciculus of nerve-tubules, and a space, probably lymphatic, exists between the perineurium and the fasciculus. On looking at a transverse section of a stretched nerve the epineurium is seen to be tightened, the fasciculi compressed, and the lymphatic space obliterated.

Next, the changes that take place in the nerve-tubules are considered. These consist in a segmentation of the soft medullary sheath; sometimes the nerve-tubule is ruptured, and more rarely the axis-cylinder itself gives way. Such changes in a living nerve are consequently followed by degenerations. The sheath becomes infiltrated and hyperæmic, the vessels compressed or twisted, and the whole mass of nerve becomes disintegrated and subject to soft atrophic changes. Then restorative changes follow.

The author next takes up the physiological results of nerve-stretching. The motor and sensory properties of the nerve are diminished, but the motor less markedly so than the sensory. The irritability of a nerve is increased by slight stretching, but by continuing the stretching this irritability is ultimately extinguished. The reflex properties are also greatly diminished, but not so suddenly as the voluntary motor, or sensory functions. Coming to the question as to whether the mechanical effects of nerve-pulling are transmitted to the spinal cord or not, the author gives the results of experiments on stretching the sciatic nerves carried out by himself and Mr. Horsley, in the following words:—'We find the stretching effects passed to the sciatic plexus; we find it passing to the roots of the nerves, where it must disturb the spinal ganglia on the posterior roots, and it must disturb the dura mater. It may, by disturbing the dura mater, shake the cord a little through the ligamentum denticulatum on either side; but we find no change of tension in the intraspinal or intrameningeal part of the nerve, and no movement in the cord.'

With regard to the therapeutic results, the author relies on the access afforded to his hearers to the medical periodicals, and contents himself by giving some interesting tables published by Artaud and Gilson, and another by Nodet, adding a few cases which came under his own care and notice at University College Hospital (Vide *Medical Digest*, Section 1,242 : 4). The remainder of the lecture is then confined to the modes in which nerve-stretching cures the pains of neuralgia and tabes. Speaking of neuralgic pains, the author considers that a large proportion of neuralgia are due to the *nervi nervorum*, which ramify in the nerve sheaths; these are ruptured when the nerve-trunk is stretched, much more readily than the tubercles of the trunk itself, and thus the pain is often relieved.

Tabetic pains are associated evidently with changes in the posterior roots, and in the spinal cord, rather than with changes in the nerves outside the dura mater. The benefit produced by stretching the nerve in such cases is supposed to be due to excitation of the vaso-motor or trophic centres in the ganglia, and the changes induced in the nerve-elements in consequence. The amount of stretching advised, is to use a pull of about thirty pounds on the nerve, and to make a steady pull, for five minutes at least. In cases of neuralgia the author also suggests that the nerve should be pulled upwards and downwards, but in cases of tabes it is essential to pull from the trunk or body, and of less consequence to stretch from the extremities.

It is not always necessary to cut down on the nerve to stretch it, for enough stretching of the sciatic may be produced by bending the thigh completely on to the body.

The dangers of the operation are comparatively slight, and the subject demands much further consideration.

Richard Neale, M.D.

Article 1954.

DÉJERINE AND OTHERS ON PERIPHERAL NON-TRAUMATIC NEURITIS.

Peripheral neuritis occurring without any external injury, although by no means uncommon, has until recently attracted only little attention, and there is but very meagre information found about it in the best text-books on nervous diseases. It is, however, known that it may supervene under the influence of cold, lead-poisoning, infectious diseases, such as small-pox, diphtheria, typhus, tuberculosis, and alcoholism. It also occurs as a complication in several diseases of the nervous centres, and causes, according to the function of the affected nerve, either severe symptoms in the sphere of sensibility, or various trophic disturbances, such as vesicular or bulbous eruptions, indurated œdema, and perforating ulcer. It would appear to be the immediate cause of acute bed-sores, supervening after cerebral hæmorrhage, &c., and there can be no doubt that it will soon be shown to have a considerable clinical and pathological importance. It has probably been overlooked, partly from preconceived ideas about the dependence of neuritis upon central changes, and partly because the alterations of the nerves are not perceptible to the naked eye, but are only seen when the parts have been stained and are microscopically examined. To the unassisted eye they appear perfectly normal, showing neither softening nor induration, œdema, or any other change.

In examining cases of tabes—locomotor ataxy—it has often struck observers that there existed no apparent relative proportion between the symptoms in the sphere of sensibility observed during life, and the lesions found in the posterior columns and nerve-roots after death. The latter appeared generally very much of the same kind and degree, whether there had been much or little affection of sensibility shown clinically. This naturally led to the supposition that there might be, apart from the central lesion, likewise a peripheral one in the cutaneous nerves themselves.

As far back as 1858, Türck, of Vienna, who has been the pioneer in many investigations concerning the morbid anatomy of the nervous centres, took up this inquiry, but was led to negative results, as was also Vulpian in 1868. Westphal was the first to discover, in 1878, atrophy of the cutaneous branches of the crural nerve in a case of combined posterior and lateral sclerosis. Pierret afterwards drew attention to the dependence of the lightning pains, anæsthesia, and certain trophic disturbances, upon a form of peripheral neuritis analogous to optic neuritis, which was seen in the terminal expansions of the cutaneous nerves, became less marked further from the periphery, but was again discovered in the central districts of the affected nerves.

An excellent contribution towards the study of this question has lately been made by Déjerine (*Archives de Physiologie Normale et Pathologique*, Juillet 1883). He examined two cases of tabes in which there had been during life very marked sensory disturbances of nearly the same degree of severity, yet where the examination of the central parts involved showed considerable differences in the degree and distribution of the morbid process. In one of them, both Burdach's and Goll's columns were found throughout their extent changed into a fibrous tissue, with sclerosed vessels; while in the other the lesion had barely commenced, and there were still plenty of healthy nerve-tubes present. The appearance of the posterior roots corresponded to that of the posterior columns; and one would therefore have been tempted to conclude from the *post mortem* appearances that there must have been in one of the cases a considerable, and in the other hardly any, affection of sensibility. As a matter of fact, however, the symptoms had been nearly the same in both. Déjerine, therefore, examined the cutaneous nerves of those parts, which had been particularly affected during life, with osmic acid and picro-carmine, and found them in a state of neuritis, while the more central parts were quite healthy. It is therefore shown that the Wallerian law, although unassailable as far as it goes, does not apply to all clinical cases. Osmic acid had scarcely produced any effect on these specimens; and, after colouring with picro-carmine and dissociation, there appeared hardly one or two healthy nerve-tubes in a specimen containing about thirty. The others were reduced to empty sheaths; but the intertubular connective tissue showed no alteration. During life there had been a considerable degree of anæsthesia, retarded transmission of sensation, and diminished faradic excitability.

Pitres and Vaillard (*Archives de Neurologie*, March to September 1883) have gone more fully into the matter. According to them, the histological alterations in idiopathic neuritis resemble very greatly those known as Wallerian degeneration, viz., such as occur after experimental section in the peripheral end of the nerve. In the beginning there is a swelling of the nucleus of the fibres and segmentation of myeline, and ultimately complete destruction of the axis-cylinder and the medullary sheath. In both cases the destroyed fibres may become regenerated, or at least replaced by freshly formed fibres. Nevertheless, the two pathological conditions are not identical. Idiopathic parenchymatous neuritis has not the regular uniform course of Wallerian degeneration, but it is sometimes slow, and at other times very rapid in its course. It may, moreover, spread from the periphery to the centre, which never occurs in Wallerian degeneration.

The authors describe five different types of inflammation, into the particulars of which we do not think it necessary to enter, more especially as they seem to us to be only different phases as far as intensity is concerned. They have found it occurring in cases of hemiplegia from cerebral softening, after fracture of the skull, in herpes zoster, leucocythæmia, and tabes. In one of the latter cases arthropathy was associated with it.

The pathology of arthropathies and other trophic changes supervening in the course of tabes, such as spontaneous fracture, perforating ulcer, falling out of nails, indurated œdema of the skin, and eruptions, is still very obscure. At the time when Charcot first described these affections the integrity of the large ganglionic cells of the anterior cornua of the grey matter had just been shown to be necessary for the proper nutrition of the muscles. From this it was concluded that in cases of arthropathy the anterior cornua must be at fault, and a few cases seemed at first to confirm this idea. Soon afterwards, however, contradictory facts were observed, and that theory has now been given up. Moreover, it would be difficult to understand why arthropathies should not be common in infantile paralysis or progressive muscular atrophy, in which those cornua are notoriously affected. On the other hand

arthropathy is not habitually connected with muscular wasting. It is therefore much more probable that the joint-affection is owing to local changes in the peripheral nerves.

Such changes have been observed by Pitres and Vaillard in several cases of tabes. In one of them degeneration was found in the sciatic, the posterior articular, and the muscular nerve belonging to the same, characteristic swellings, &c., having been observed clinically in the corresponding joints. In another case they found changes in the dorsal branch of the musculo-spiral nerve at the lower portion of the forearm, and in all the collateral nerves of the first finger; to which corresponded clinically deformity of the metacarpo-phalangeal joint of the first finger. In the same case there was found, in the lower extremities, atrophy of nerve-fibres in the plantaris internus, and the collateral internal and external nerves of the big toe, to which during life had corresponded perforating ulcer in the palms of the feet, and dystrophia of the toenails. Again, in a case of Pott's disease with compression-myelitis, where bed-sores had formed on the buttocks, the trochanter, and sacrum, atrophy of the nerve-fibres supplying these parts was discovered.

It appears probable that the central lesion is not the immediate cause of this peripheral neuritis, but rather a predisposing condition, and that other influences, such as pressure, &c., are likewise required for its production. The inflammation affects only the nerves, and the connective tissue remains generally healthy. Only upon total destruction of the nerve-tubes does any overgrowth of connective tissue appear to take place. This form of neuritis is distinguished from Wallerian degeneration chiefly by its different course. The latter follows a regular evolution, the phases of which take place at perfectly definite intervals, and in a fixed manner which has been determined by experiment. Idiopathic neuritis, on the other hand, may last a few hours or days, or an indefinite time, and has an ascending centripetal tendency. There is no continuous alteration between the cord and the altered nerves, the larger nerve-trunks being generally healthy.

All forms of peripheral neuritis do not give rise to trophic or sensory symptoms. These latter occur only when the proportion of altered nerve-fibres is a considerable one, and vary according to the functions of the affected fibres, as well as to the degree of change which has taken place in them. Acute bed-sores, ulcerations without tendency to heal, herpetic, bulbous, and pemphigoid eruptions, perforating ulcers of the foot, chronic œdema, arthropathy, and dystrophy of nails, together with local anæsthesia, are the principal symptoms.

Pierret considers it probable that the corpuscula tactûs in the skin are primarily affected in these cases, and that the neuritis is a consequence of this alteration; but this is not based on actual observation, and is merely a theoretical supposition. Langenhans, who has recently examined the corpuscula tactûs in six tabetic patients, in whom considerable alterations of cutaneous sensibility had been observed during life, has found those structures perfectly normal. The alteration of the nerves is therefore independent of their trophic centres and terminal expansions, and must be looked upon as a true peripheral affection.

Julius Althaus, M.D.

Article 1955.

SORMANI ON THE ETIOLOGY, PATHOGENESIS, TREATMENT, AND PROPHYLAXIS OF PULMONARY TUBERCULOSIS.

Prof. Sormani contributes an important and interesting article to the *Annali Universali di Medicina*, Sept. 1883, under the above title. The numerous observations now recorded in many countries confirm the importance of the discovery of Koch of the bacillus of tuberculosis, in diagnosis and prognosis. The presence of the bacillus in the sputa, pus, and other secretions, and in the tissues and organs, is a certain indication of the tubercular process, and is sufficient to establish its diagnosis. The absence of the bacillus in the excretions, if repeatedly confirmed, with rare exceptions only, renders it certain that the affection is not tubercular. If the bacilli be abundant, long, sporigenous, and in groups, there is an active proliferation of the micro-organism, and the disease will probably run a severe and rapid course. For the microscopic examination of the bacilli the author prefers Ehrlich's method, modified by Weigert. A thin layer of sputum, spread on a cover glass, is dried over the flame of a spirit-lamp, and then immersed in the solution of gentian-violet (Weigert's formula: gentian-violet, 1·5 parts, dissolve in 15 parts of absolute alcohol, add 3 parts of oil of aniline, and dissolve in 100 parts of distilled water). It should remain in this solution for fifteen or twenty minutes, or longer; it is then rapidly passed into dilute nitric acid (50 per 100), then into alcohol, and then into a weak aqueous solution of vesuvine, and, lastly, well washed in absolute alcohol. The preparation may be mounted in oil of cloves, castor-oil, or dammar varnish. Sections require three or four hours to take the colour, and should generally be allowed to remain twenty-four hours.

Prof. Sormani has made many experiments on the inoculation of animals with tubercular matter. The results of these experiments are published in the *Rendiconti del R. Istituto Lombardo*, July 1883. Inoculation with sputa containing bacilli gives rise to tuberculosis, which is developed more rapidly when the bacilli are abundant. The inoculated bacillus multiplies in the organism, and invades the lymphatic system, liver, spleen, and serous membranes; by its presence it sets up a chronic inflammatory process, with formation of products which become caseified, and subsequently soften, producing gradual destruction of the organs. The bacillus is found in the centre of the tubercles in their earliest stage of formation, and hence is the cause and not the effect of the morbid process. The lymphatic vessels, amœboid cells, and the blood-current are the means by which these micro-organisms are transported from one organ to another and diffused throughout the body. Koch's discovery gives us a new indication as to treatment. It is reasonable to suppose that a substance may be found which, while innocuous to the individual and to the function of the diseased organ, may act on the bacillus or its substratum, and so arrest its proliferation.

Recent studies on the artificial culture of morbigenic germs and other micro-organisms, show that these organisms are very capricious, and that it is sufficient to modify very slightly the cultivating menstruum to arrest their proliferation. In the artificial cultivation of aspergillus niger, an infinitesimal trace of nitrate of silver renders impossible

the vegetation of this microscopic fungus (Duclaux, *Ferments et Maladies*). The problem is to find some substance which, while harmless to the system at large, may yet prevent the growth of the tubercle-bacillus. Many antiseptics have been tried to this end. The fumes of sulphurous or nitrous acid are fatal to the bacillus, but are not respirable. Corrosive sublimate in a solution of 2 per 1,000 does not destroy the bacillus (Vallin).

Iodoform has been tried in many ways. The author gives it internally in the dose of 50 centigrammes daily, and by inhalation in the following manner. A Woulf's bottle with two necks is taken; into one neck is inserted a glass tube, which reaches nearly to the bottom of the bottle; into the other a short tube is placed, which is connected with an India-rubber tube, having at the other end a respiratory mask; to the longer tube is fastened a cylinder containing compressed air (Waldenburg's apparatus. *Die Pneumatische Behandlung:* Berlin, 1876). In the bottle is placed about 50 grammes of iodoform, previously finely powdered, with the addition of a little ether. When the apparatus is used, the compressed air passes through the Woulf's bottle, and the strong current of air takes up a part of the iodoform and carries it into the lungs. To facilitate the volatilisation of the iodoform, the bottle may be placed in water and heated up to 100° (decomposition of the iodoform only takes place at 120°). The greater part of the iodoform inhaled is arrested in the bronchial tubes, but in animals some reaches the alveoli themselves. At first one only of Waldenburg's cylinders a day was used; the number was gradually increased to ten. The iodoform was never irritating; it was absorbed, and could be recognised in the urine by nitric acid and sulphide of carbon. After about a month of this treatment, the patients had notably improved; fever and night-sweat had disappeared; and the cough and expectorations were much diminished. In three months they had gained from 5 to 12 kilogrammes in weight, but the bacilli had not entirely disappeared from the expectoration. The great diminution of the expectoration, however, proved that the proliferation of the micro-organism was much less active. The local mischief was arrested; the vital capacity of the lung was rather diminished than increased; and this is in harmony with the fact that cicatrisation is taking the place of the destructive process.

Koch's process to prepare the gelatine for the artificial cultivation of the bacilli takes a week or more. Dr. Sormani finds that it can be quite as well and much more quickly obtained by heating in a water-bath calf-serum previously filtered and rendered alkaline by the addition of crystallised carbonate of soda. His best cultivations were made with this gelatine in watch-glasses, soldered together with mastic and silicate of potash. Out of sixty attempts, in six only were developed the little greyish-white, sometimes yellowish, patches described by Koch; these patches contained very numerous oval spores, united in zoogloea, and immovable, of uniform size, the greatest diameter being one micro-millimètre. On the addition of a liquid the peripheral spores become detached, and acquire a vivacious oscillatory movement. Later appear very fine transparent oscillating bacteria, two to seven micro-millimètres long, or even more, articulated, granular, and, like the spores, strongly colouring with gentian violet. Among the spores and bacilli numerous crystals of chloride of sodium and carbonate of soda were visible.

The uncertainty still existing as to the value of the spores and bacilli obtained as the products of cultivation, and the great tendency of these cultivations to fail, render it premature to decide on the efficacy of the various therapeutic agents from the negative results only obtained by artificial cultivation.

Dr. Sormani agrees with Marchiafava that the bacillus is not found in the breath of the phthisical. The bacillus is preserved unaltered in the expectoration for a very long time, and resists putrefaction and desiccation, and preserves its virulence. Tuberculosis is not directly contagious, but indirectly it is, by means of the dried powdered tubercular sputa which float about as dust in the air.

In the prophylaxis of tuberculosis, the prompt destruction of tubercular sputa, and the efficacious disinfection of the rooms and objects soiled by tubercular matter, must be chiefly insisted on.

G. D'Arcy Adams, M.D.

Article 1956.

NEELSEN ON A CASE OF TUBERCULOSIS.

Since the discovery by Koch of the bacilli of tubercle, and the improved methods of their detection, these organisms have been found in the excretions and secretions, as well as in the tissues of both living and dead. Their presence or absence has been taken to be the decisive criterion of the tubercular, or non-tubercular, nature of any particular case of disease. Precise conclusions, however, can only be arrived at by the collection of numerous instances, towards which Dr. Neelsen, of Rostock, contributes the following case (*Centralbl. für die Med. Wiss.*). A labouring man, aged 24, strongly built, previously healthy, and without known hereditary tendency to disease, was in March last year taken with what appeared to be remittent fever, but continued at his work for a fortnight, when, on account of dyspnœa and pain in his side, he was admitted into the hospital, on April 5. He was then suffering from pleurisy with effusion on the left side, and displacement of the heart. A puncture gave exit to about six pounds of an albuminous fluid, containing white and red blood-corpuscles. The operation was followed by refilling of the cavity, so that in about eight days the chest was as it had been before puncture. The effusion, however, gradually decreased in quantity, and the heart resumed its position. Dyspnœa still remained, and increased in severity until the countenance became cyanotic, and he had also several attacks of epistaxis. Towards the end of May he suffered from diffused phlegmonous inflammation of the shoulder, arm, and side of chest. He died in the June following. The body's temperature had throughout been at 38°·5 to 39°·5 C. (= 100° to 101° F.); his pulse varied from 120 to 160. On *post mortem* examination the left side of the chest was found to contain about three litres (= 5¼ pints) of clear fluid, containing shreds of fibrin. There were present evidences of old disease of the pleura, beneath which, however, was an extensive neoplasm of a gummatous appearance. The pericardium contained about four drachms of clear fluid. The bronchial and tracheal glands were enlarged and softened by a whitish yellow infiltration; the mucous membrane of the bronchi was unaltered. The right lung was œdematous, but presented no other change. Other organs were also normal in character. Dr. Neelsen observes that he should, in general terms, designate

the preceding case as one of caseous peripleuritis of the left side, with sero-hæmorrhagic infiltration, and secondary caseation of the bronchial and tracheal glands. The neoplastic deposit was, under the microscope, found to consist of round, spindle-shaped, epithelioid cells, in confluent, irregularly rounded deposits, which showed a necrosis of their centres, whilst at their borders they passed, without definite outline, into the adjacent tissues. There were no giant-cells to be seen. Treated with potash and suitable colouring reagents, bacilli identical with those of tubercle were found in this morbid structure. These bacilli were not found in groups and clusters, as is often the case in tubercular deposits of the lungs, but singly, or two or three together, some in the cells, some free between the cells, sparsely scattered in the necrosed centres of the deposits, more numerously towards the margins (six or eight together in the field), so that no unprejudiced observer could doubt their relation to the whole morbid process, as tuberculosis, certainly of an active form, which should in ten weeks prove fatal to an otherwise healthy and strong man.

W. B. Kesteven, M.D.

Article 1957.

LAUNOIS AND VARIOT ON MULTIPLE NEUROMATA.

As was first pointed out by Lebert, there are three varieties of neuromata. A number of tumours may be developed on the trunk or branches of the same nerve—*multiple neuromata of one nerve*; or on many or all of the nerves of a particular region—*multiple neuromata of a region*; or, finally, they may take on a general development—*neuromata of general multiplicity*. The last form has recently been studied by M. P. E. Launois and Dr. G. Variot, of Paris, who give in the *Revue de Chirurgie*, No. 6, 1883, full reports of two cases under the care of Nicaise and Legroux, and an analysis of thirty-one previously published cases, including those recorded by Robert W. Smith, of Dublin.

Multiple neuromata may remain unrecognised for a long time, especially during infancy, a fact that has led many to deny the existence of such growths at this period of life. They may, however, the authors state, exist in very young subjects, and, according to Nicaise, are often even congenital and hereditary. The patient does not become aware of the presence of the tumours, until one or more have acquired such size as to interfere with movement of the affected part. The number of the tumours varies very much in different cases. Robert Smith counted 800 in one of his patients, and 2,000 in another. In one of the cases recorded by the authors, 258 growths existed in the anterior region of the body. They may be seated on all the nerves of the body, but during life can be made out only in regions where the nerves lie near the surface. Thus they have usually been made out in the extremities, the neck, the abdominal wall, and along the intercostal spaces. No mention has been made of their presence on the nerve-branches of the hand and foot. The localisation of the tumours on the tracts of nerves constitutes one of the principal elements of diagnosis; and, in consequence of the symmetry of the nerve-trunks, there is a certain symmetry in the arrangement of these growths. Their form is constant, each growth being fusiform, elongated, and with its long axis following that of the affected nerve. The tumours are usually small, varying from the size of a pea to that of a large almond. They may acquire, however, considerable dimensions, and one has been described of the size of an adult's head. In most, if not all cases, a tumour of some size is to be found at the superior and inner portion of the thigh. The growths, which are of cartilaginous hardness, may be moved freely from side to side, but are fixed in the direction of the long axis of the affected nerves. In some cases, the nerve-trunks are hypertrophied along their whole course. As a rule, there is an absence of pain in cases of multiple neuromata, but the authors state that very painful symptoms may occur when any of the tumours have become very large. When these tumours are to be found on several superficial nerves, it may be assumed that they exist also on deep-seated trunks, although there may be an absence of symptoms indicating any disturbance of their functions. When the pneumogastric and phrenic nerves and the cardiac and pulmonary plexuses are affected, there are no disturbances of respiration, digestion, or circulation. To the authors, who have made a histological examination of many of these tumours, there is nothing surprising in this fact. Most of the nerve-fibres, though widely separated by newly formed connective tissue, preserve their anatomical characters and normal structure and, consequently, the integrity of their functions. Under certain conditions, however, the extension of the neuromata to deep-seated trunks may be accompanied by nervous phenomena. The presence of some of these growths in the nerves of the cauda equina, coinciding with a presence of others within the spinal canal, may exert compression and cause paralysis. In such cases paraplegia, disturbances of the functions of the bladder and rectum, and more or less permanent contractures, have been observed. The ultimate stage in cases of multiple neuromata is one of cachexia and marasmus. The patient falls away, loses his appetite, frequently suffers from diarrhœa and vomiting, and becomes much emaciated. Sleep is rendered impossible, either by violent headache or by repeated contractures. Although the patient dies through exhaustion, almost all the organs at the necropsy are usually found in a healthy condition. Follin has suggested that this ultimate stage—that of the so-called neuromatous diathesis, may be result of extension of the growths to the great sympathetic, the ganglionic cells of which are destroyed through the pressure of hypertrophied fibrous tissue.

Multiple neuromatous tumours, when superficial, may be confounded with subcutaneous lipomata. These latter tumours, it is well known, may be generalised, as in a case described by Broca, in which 2,086 fatty growths were counted on the same subject; and, according to Huguier, they may then affect a symmetrical arrangement. But multiple lipomata, Launois and Variot point out, have special characters; they are usually rounded and lobulated, and though their consistence varies very much according to their structure, they rarely acquire the characteristic hardness of neuroma. Gummata never attain a multiplicity comparable to that of neuromata; and when they occur in a multiple form, some of the tumours present inflammatory phenomena and are undergoing a process of softening. Generalised adenopathy has special characters, which should prevent it from being confounded with the growths described in this paper.

The ganglionic tumours are more or less bulky, and join together to form large masses confined to certain regions, as the neck, armpit, and groin.

This paper concludes with a full report of a histological examination of multiple neuromata from the subcutaneous nerves of the abdomen. The growths, the authors hold, are the result of a neoplastic process which consists in excessive proliferation of the intrafascicular connective tissue. The nerve-tubes are separated and pushed outwards, but for the most part maintain their integrity and present under the microscope their normal characters.

W. Johnson Smith.

Article 1958.

VULPIAN ON POTASSIUM BICHROMATE AS A TOXIC AND THERAPEUTIC AGENT.

M. Vulpian has studied experimentally the toxic and therapeutic effects of this salt (*Jour. de Pharm. et de Chimie*, Sept. and Oct. 1883; *Gaz. Hebd. de Médecine*, December 14, 1883). The salt was given hypodermically, dissolved in twenty parts of water, to dogs, rabbits, and frogs; a dog weighing 22 lbs. receiving nearly 4 grains of the bichromate. The results were vomiting, diarrhœa, bloody evacuations, great general feebleness, severe clonic convulsions, and speedy death in from two to four hours. The convulsions were indubitably observed in only one dog, and were not observed in rabbits. On section, all the muscles were found red; the heart and lungs were healthy; the liver exhibited chamois leather coloured patches disseminated over its surface, and the hepatic cells contained numerous fatty granules; the spleen was normal; the gastro-intestinal mucous membrane was congested, without ulceration. The symptoms and *post mortem* appearances in dogs and rabbits were similar. Frogs merely exhibited progressive enfeeblement of the general movements, feebleness and irregularity of the respiratory movements, arrest of the sanguineous heart in diastole, and subsequently of the lymphatic heart; and in these animals the colour of the blood indicated an alteration in this liquid, as Priestley had already shown is the case when the neutral chromate is administered.

Priestley had drawn from his observations these conclusions. The nervous centres are first excited, then depressed; in the rabbit and guinea-pig there are first convulsions, then paralysis, principally of the hinder limbs; in the frog, tetanic contractions of the anterior limbs; disappearance of reflex actions whilst the nervous trunks still retain electro-motricity, whence it results that the nervous centres are affected before the peripheral nerves and muscles; no special action upon the heart, which undergoes changes only secondary to those in the blood. M. Vulpian, on the other hand, only ventures thus far—that the bichromate *appears* to act upon the nervous system, *perhaps* at first by excitation; then, more clearly, in bringing about a depression of the nervous centres. It also *appears* certain that the salt acts upon the extremities of the nerves in the stomach and intestine. By other considerations, of an entirely different kind, M. Vulpian was led to investigate whether in medullary affections, especially in tabes dorsalis, the bichromate is serviceable, and whether in gastric affections it will not act like the arsenates and arsenites.

In medullary affections, potassium bichromate was given in the form of pills, the dose never exceeding 1½ grain in the case of tabes dorsalis, and its use was alternated with that of potassium iodide and silver nitrate. In this dose, no toxic effects were ever observed. In gastric affections, the salt was given in doses of half a grain, gradually increased to three-quarters, and even 1½ grain daily; and in some cases of dyspepsia apparently with advantage. These cases were such as led to the supposition that they were associated with gastric neoplasms. In true cancerous affections of the stomach, Vulpian holds the bichromate to be valueless as a remedy.

Thos. Stevenson, M.D.

Article 1959.

RICHELOT ON COLLATERAL INNERVATION AFTER RESECTION OF THE MEDIAN NERVE.

Dr. L. G. Richelot, of Paris, who doubts whether the double function of a mixed nerve can be re-established after complete division in the human subject, reports a case of lesion of the median nerve (*L'Union Médicale*, No. 73, 1883), the chief points of which are thus briefly stated. The right median nerve of a man, aged 26, through the growth of a fibroma on a part of its course, and through a morbid change of some of its fibres after compound fracture of the humerus, had lost to a considerable extent its influence on the portion of integument and the muscles to which this nerve is usually distributed. The continuity of the nerve, however, remained uninterrupted, as was proved by the persistence of voluntary movements. The tumour was extirpated, and a portion of the trunk of the nerve several centimètres in length was resected. The operation was followed by the appearance of two phenomena; sensibility, though diminished, still persisted over the whole region to which filaments of the median nerve were distributed; and, on the other hand, though certain movements were abolished, yet there was a persistence of several which are generally supposed to be under the influence of the median nerve. The diminished sensibility, which had existed previously, to the operation might by some be wholly attributed to the action of those fibres of the median nerve which had remained intact; but as it was not abolished after resection of a portion of this nerve, it was no doubt due, in part at least, to the influence of neighbouring nerves. Indeed, Dr. Richelot states, it not only happens after section of a nerve, that the sensibility, absolutely suppressed at first, becomes progressively re-established by a process of substitution, as if the filaments of the neighbouring nerves gradually invaded the anæsthetised part; but this nervous substitution may be established together with atrophy of one trunk, so that, when this trunk has almost completely disappeared, its functions may he thoroughly maintained by means of collateral innervation. Cases are not rare, it is asserted, in which after section of a sound nerve sensibility has been restored in part to the integument in the course of a few hours. The operation in Dr. Richelot's case suppressed the action of the flexors on the phalanges of the first two digits; but it curiously spared the three others. If it be true that the ulnar nerve supplies the flexor carpi ulnaris and the two internal bundles of the flexor profundus, the most elementary analysis will

suffice to proclaim that resection of the median nerve ought to weaken the first two digits by suppression of the action of the flexor sublimis, and to paralyse totally the three other digits. It is of course understood that this statement refers only to flexion of the last two phalanges, flexion of the first phalanges being influenced by the interosseous muscles and the ulnar nerve. But, in this patient, the two last digits were not weakened, and the third digit also remained unaffected. In attempting to explain this result, Dr. Richelot points out that nervous substitution, though a well-established fact with regard to sensibility, had not previously been observed in muscles. The explanation of the persistence of motility in this case is to be found, he states, in the results of some dissections of the nerves and muscles of the fore-arm that have recently been made by M. Verchère. In eleven instances out of fifteen, an anastomosis between the median and ulnar nerves was found in the upper part of the fore-arm. This emanates from the median near the origin of the branches which go to the flexor muscles, and joins the ulnar nerve directly or by the intervention of a small plexus, at the point of origin of the branch to the two internal bundles of the flexor profundus. This anastomotic branch supplies filaments to both the flexor sublimis and the flexor profundus. In instances where this anastomosis is absent, the branch supplying the internal bundles of the flexor profundus sometimes gives off a filament which passes into the flexor sublimis. It results from M. Verchère's researches, that the two common flexors of the fingers are both supplied by the median and ulnar nerves, and that the persistence of muscular activity after resection of the median nerve in a region that has hitherto been supposed to be under the influence solely of this nerve is such a result as might be expected. In many instances, however, the filaments sent off by the anastomotic branch are very rudimentary; and, again, the wound of the median may be below the anastomosis.

W. Johnson Smith.

Article 1960.

BERLIN ON THE PHYSIOLOGY OF HAND-WRITING.

Berlin gives (*Archives für Ophthalmologie*, Band xxviii., Heft 2) the results of an examination undertaken by the Wurtemburg Government to investigate the influence of the ordinary slanting style of writing on the eyes and bodily position of the school children. From observations made in the schools it appeared there were three more or less distinctly separated typical attitudes taken by the child while writing:—

(1.) A relatively erect posture, with a considerable distance between the face and the book, and the pelvis nearly parallel to the edge of the desk; (2.) The head and spinal column bent to the left, the face at a less average distance from the book, and the pelvis either (*a*) inclined obliquely to the left or (*b*) nearly straight; (3.) The head bent to the right, the face nearer the desk and book, the pelvis inclined obliquely to the right.

The last attitude was much the most common, the first less frequent, the second observed with but few. All the children stooped forward more or less, least in the first, most in the third, attitude. There was also a little turning of the head to the right, so that the left eye stood nearer the desk, best marked in No. 3.

A constant relation was found between the attitude and the position of the copy-book. The line joining the centres of the eyes—the base-line—when projected upon the page at the place where the point of the pen rested, crossed the line of the manuscript at a considerable angle, running from the left and above to the right and below. To this rule the exceptions were less than 2 per cent.; in these, the base-line crossed from down and left to up and right. Never was there found parallelism between the base-line and the lines of a copy-book. It appeared farther that the relation of the base-line to the lines of a book determined the attitude of the writer; in other words, the position of the book determined the position of the whole body.

In attitude No. 3, the page always was on the right side, its lines parallel to the edge of the desk. With this position of the page, to comply with the rule as to crossing of the base-line, it was necessary that the left eye should be farther forward, and this was effected partly by inclining the head to the right, partly by right obliquity of the pelvis.

In attitude No. 1, the lines of the page ran from left down to right up, the page being either to the right or in front. Here the customary relation of the base-line to the lines of manuscript required that the base-line should be nearly parallel to the edge of the desk, and this was attained by the assumption of a relatively upright position of the body.

In attitude No. 2 (*a*) again the book was placed very obliquely, so that its lines made an angle of much more than 45° with the edge of the desk. This position required that the base-line should incline to the left to preserve the characteristic angle, and to effect this the head was bent to the left and the pelvis swung in the same direction.

The constancy in the relation of the base-line to the lines of the writing-book naturally led to the question, What is the law which prescribes the direction of the base-line? This question seems satisfactorily answered by the discovery, as the result of numerous careful measurements, that the downstrokes of writing make an angle of 90° with the base-line. Yet there are not unfrequent variations from this law, and in two directions. On the one hand, the angle between downstroke and base-line is much greater than 90°, ranging to 120° and more; on the other hand much less, to 50°.

In the first of these groups, it was found that, instead of the downstrokes, the upstrokes formed a right angle to the base line; in the second group, the upstrokes were parallel to the base-line. The cases of this last group are identical with those above mentioned in which the base-line crossed the manuscript from left down to right up, and in which attitude No. 2 (*b*) was assumed.

These general results were obtained by examination of more than 300 children. Further observations and measurements were made on 562 other pupils of various ages, and attention was given also to many other details. Berlin only discusses here the data which serve to explain the influence which the laws governing the movements of the eyes have on the act of writing. The difficulty of measuring accurately the angle made by the downstrokes with the base-line proved to be considerable. Yet the results were on the whole so constant, that this angle is regarded as the cardinal point in the physiology of writing. Of 371 measurements, 93 per cent. gave

approximately a right angle between the base-line and the downstrokes, but few deviating considerably from this, and the average being 85°·5. In 5 per cent., the upstrokes stood at a right angle to the base-line. Finally, in 2 per cent. the upstrokes were parallel to the base-line. The committee believed, therefore, that 93 per cent. of the writers followed the downstrokes with the eyes and in a direction perpendicular to the base-line ; 7 per cent. followed the upstrokes, 5 per cent. perpendicularly to the base-line, 2 per cent. parallel to it.

A peculiarity was observed in the writing of those individuals in whom the angle between base-line and downstrokes was much less than 90°, which seemed of importance. The longer strokes above the lines of the paper were concave toward the left ; sometimes also the strokes below the line were concave to the right, so that the whole stroke approached an *S* form.

The explanation of this phenomenon, as well as of the usual relation of the base-line to the downstrokes, and, exceptionally, to the upstrokes, is found in the established laws of ocular movements. Only when the eyes move vertically or laterally do the visual axes follow straight lines ; when the movement is diagonal, the path is a curved one. The hand of a child in writing follows the same path as the eyes ; it can, therefore, form the straight down or up strokes only by moving vertically to the base-line, or, exceptionally, parallel to it. When it tries to form the strokes in a direction diagonal to the base-line, they become often involuntarily curved. Only by a few, however, is this attempted. Usually the child twists head and body to bring the base-line into the position in which the strokes can be most easily made straight. If, then, the book be held nearly parallel to the edge of the desk, head and body will be kept continuously turned to the right, and this position will tend to cause spinal curvature, and, through speedy tiring of the muscles of the back and consequent approximation of the eyes to the book, myopia.

The conclusion is reached, that the act of writing is dominated mainly by the laws of ocular movements. With the lines of the copy-book parallel to the edge of the desk the child *must* sit twisted to the right ; with the book inclined obliquely to the left he *can* sit erect ; while, if the obliquity of the book be excessive, he must twist toward the left.

Of 514 children, in about 80 per cent. the left eye was nearer the desk than the right, the maximum being 35 millimètres ; in 5 per cent. the right eye was nearer, in 15 per cent. the distance of both eyes was the same. The degree to which the eyes were directed upward or downward in relation to the plane of the face was also measured. In 3 per cent. only was the direction of the gaze above the horizontal ; the average direction was 20° downward.

As to the most important point, the perpendicular direction of the strokes to the base-line, these observations agree with those of Weber ; in other details, they differ from his conclusions.

Sand in Dyspepsia.—The most fantastic forms of treatment are sure to find some disciples. According to the *New York Med. Record*, Dr. Kerlus thinks that fine sand may be advantageously mixed with the food. Herbivorous animals eat dust and mud, which make the food less heavy, and birds often swallow sand. Consequently Dr. Kerlus gives sand to his dyspeptic patients, who appear to derive benefit from it.

Article 1961.

BECHTEREFF ON THE COURSE OF THE PUPIL-CONSTRICTING NERVE-FIBRES IN THE BRAIN, &c.*

The majority of modern physiologists admit that the centre for the reflex-contraction of the pupil under the influence of light is situated in the corpora bigemina in birds and lower vertebrates, and in the region adjacent to the corpora quadrigemina in higher mammals, including man. It is taught further, that the optic nerve, through the mediation of this centre, is brought into connection with both oculo-motor nerves ; in consequence of which a ray of light falling on one of the eyes, produces, not only constriction of the corresponding pupil, but contraction of the pupil of the opposite eye. To verify and elucidate the subject, Dr. V. M. Bechtereff (*Vestnik Klin. ee Sudeb. Nevropath.*, 1883, Vol. i., 89–114) undertook a series of experiments on dogs and birds, and came to results summed up by him as follows.

1. There exist no reflex nerve-fibres contracting the pupil, either in the optic tracts, or in their central endings within the corpora geniculata and quadrigemina in the higher animals, and within the corpora bigemina in birds.

2. The reflex pupil-contracting fibres starting from the retina and following the course of the optic nerve, enter behind the chiasma directly into the central grey matter surrounding the cavity of the third ventricle, and then they run to the nuclei of the oculo-motor nerve, whence they, together with the stem of the latter, return to the periphery.

3. They remain uncrossed in their whole passage within the central grey matter.

4. There exists for each eye a separate and independent arc passing through the optic nerve in the corresponding half of the central grey matter, and through the nucleus and stem of the oculo-motor nerve of the same side.

5. There exists a connection between both reflex arcs, by means of which a reflex is transmitted from one eye to the pupil of the other. This connection is established, probably, with the help of the commissural fibres binding together both nuclei of the oculo-motor pair.

6. The centres of reflex contraction of the pupil are not situated in the region of the floor of the third ventricle, as Hensen and Völckers think, nor behind the corpora quadrigemina, as Adamuk supposes ; most probably they are localised in the nuclei of the oculo-motor nerve.

7. There exist in the region of the floor of the third ventricle no centres which would serve for contracting the ocular muscles in the sense of Hensen and Völckers.

8. The changes in position of the eyes, which occur on stimulation or injury of the region of the floor of the third ventricle simultaneously with general motor disturbances (as disturbance of the equilibrium of the body and forced movements), are, in their character, closely similar to the changes in the position of the eyes, occurring after destruction of the semicircular canals, and olivary bodies of the medulla oblongata ; all that they prove is, that

* On the Course of the Pupil-constricting Nerve-fibres in the Brain, and on the Localisation of the Centre for the Iris and Contraction of the Ocular Muscles (*Vestnik Klinitcheskoi ee Sudebnoi Psychiatriee ee Nevropathologiee.* [The *Herald of Clinical and Forensic Phychiatry and Neuropathology*], 1883, Vol. i., pp. 89–114).

the above-named region possesses an influence on the whole motor sphere of the animal, including the eyeballs.

9. The centres for the voluntary movements of the eyeballs are situated in the region of the nuclei of the oculo-motor nerves, since only the destruction of these nuclei or of the rootlets originating in them is followed by permanent alterations in the position of the eyes.

10. The existence of an accommodation-centre situated in the floor of the third ventricle, and separate from the nuclei of the oculo-motor nerves, cannot be regarded as proved.

11. The dilatator effect of stimulation by pain on the pupil is not transmitted through the fibres of the sympathetic nerve; painful stimuli act independently, inhibiting the light-reflex of the pupil.

12. The so-called 'reflex immobility of the pupils' ('reflectorische Pupillenstarre') is dependent most likely upon the pathological processes interrupting the arc of light-reflex on the way from the optic chiasma to the nucleus of the oculo-motor nerve.

V. Idelson, M.D.

Article 1962.

VELIAMINOFF ON LIGATURE OF THE COMMON CAROTID ARTERY.

In the *Vratch*, 1881, Nos. 45 and 46, and 1882, No. 30, Dr. N. A. Veliaminoff, of Professor K. K. Reyher's clinic, in St. Petersburg, publishes an account of thirty-three cases in which the common carotid was tied. In thirty-one of the cases the operation was performed by Professor Reyher, in one by Dr. Hagen-Thorn, and in one by the author. In thirty cases the artery was tied after Sir A. Cooper's method (that is, near the inner edge of the sterno-cleido-mastoid muscle, above or below its crossing with the omo-hyoid), and in one after Brasdor-Wardrop's. In all but one case the artery was tied with two ligatures and divided between them; in three of the cases, a piece of the vessel was also removed. In fourteen cases carbolised silk was used, in nine catgut, in ten silk disinfected in the manner recommended by Professor Czerny. All the cases were dressed strictly antiseptically; in twenty of them tow was employed; in others, jute or wadding, or Listerian dressing.

The operation was undertaken four times for post-traumatic hæmorrhage; once for angioma; fifteen times for malignant tumours, the removal of which was impossible; eight times before and during operation on the head (seven removals of tumours; one temporary resection of the zygoma and division of the second branch of the trigeminus in a case of thirteen years' *tic douloureux*); four during the removal of new growths on the neck; once for aneurism of the innominate artery (the case of Brasdor-Wardrop's operation). Eighteen times the right carotid was tied, fourteen the left (in one case not known). The operation was performed eighteen times in men, fifteen in women. The age of the patients operated upon varied from 21 months to 72 years.

The course of the wound was always absolutely aseptic. In sixteen cases the wound healed by the first intention. Only once erysipelas appeared (in the case of an enormous wound of the mouth, after resection of the upper jaw); and only once secondary hæmorrhage from the tied vessel followed. Any cerebral phenomena were successfully prevented by the preceding compression of the artery for some days before the operation.

Of thirty-three patients eleven (33 per cent.) died soon after the operation. But this figure does not represent the true mortality from ligaturing the common carotid. Having fully explained his reasons, the author selects only twenty-five cases which are 'fit for statistics,' and rejects the remaining eight. Of these twenty-five 'fit' cases, only one issued in death, which circumstance promptly brings the mortality from the operation itself as low as 4 per cent. According to the author's searchings, the literature of the last four years (1878-82) contains twenty more cases of the antiseptic ligature of the common carotid. [Five cases gathered by Fisher, three published by Barwell, three by Busch-Schmoll, the remaining by Lediard, Morris, Stimson, King, Hardie, Billroth-Eder, N. V. Sklifosovsky, Thiersch-Heinze, and Lidén.] All these cases recovered. Thus, of forty-five cases of antiseptic ligature registered during these four years, only one died, which makes the mortality descend still lower (2·2 per cent.)

V. Idelson, M.D.

Article 1963.

OTIS ON THE RAPID EVACUATION OF STONE FROM THE BLADDER AFTER CRUSHING.

At a meeting of the New York Academy of Medicine, on Nov. 1, 1883, Dr. Fessenden N. Otis read a paper on 'The Rapid Evacuation of Stone from the Bladder after Crushing, with Presentation of a New and Simplified Evacuator.' He stated that in his opinion the revolution that had been going on since 1878 in lithotrity was now complete, and Professor Bigelow's procedure accepted by all authorities. Dr. Otis agreed with Dr. Bigelow that before 1878 the evacuator of Mr. Clover was the only efficient one; he also stated as his opinion that Dr. Bigelow had merely confirmed surgeons in their growing belief in the tolerance of the bladder, and affirmed that the chief point in his method was the use of large catheters, and Dr. Otis himself claims to have filled in the gap between Clover and Bigelow by having determined the true calibre of the normal urethra to be 32 millimètres (rather than 21). He thinks the smallest tubes or catheters should be 27 millimètres, and the largest 32. The author, in experimenting, uses crushed coral as well representing the mixed calculus. He found that in 30 seconds a catheter of 30 millimètres carried 300 grains, and a catheter of 27 millimètres only 180 grains. He prefers a curved tube to a straight one. Dr. Otis considers that an important factor in the success of modern lithotrity is the more powerful evacuating instrument or aspirator now used, and he spoke warmly in praise of Professor Bigelow's last instrument (*Lancet*, Jan. 13, 1883), in which the route of the fragments was greatly shortened and the return of the *débris* prevented by a strainer prolonged to the centre of the bulb. He also described Sir Henry Thompson's latest instrument, in which the route is as direct as possible, but objected to both aspirators, not on account of inefficiency, but because he thought them heavy and costly, and showed a cheaper and lighter instrument he had devised. 'It consisted of a bulb of strong, annealed glass, 2 inches in diameter, into one side of which a metallic tube, connected with

a rubber air-bulb, was introduced, the tube extending up to near the top of the chamber. On the other side entered the tube from the evacuating catheter, which curved downward, and was designed to carry the *débris* nearly to the bottom of the bulb, below which was a glass receiver attached by a strong bayonet-joint. A stop-cock cut off the entrance of air into the bladder. The apparatus could be filled either by pouring water into the bulb or by first exhausting the air from it and then allowing it to fill itself.' No strainer or other apparatus was required to prevent a return of the *débris* into the bladder, because of the direction of the current, which depended on the relative position of the orifices of the two tubes in the bulb. Dr. Keyes, being called upon by the chair, remarked that Professor Bigelow had never made any claim to have discovered the tolerance of the bladder. He credited Dr. Otis with his researches in regard to the calibre of the urethra, but thought that the birth of lithotrity with complete evacuation was due to the crystallisation in the brain of Professor Bigelow of all the ideas contributing to the grand result which had previously existed in the profession, and one of the principal elements in its success was the increased efficiency of modern instruments.

G. Buckston Browne.

Article 1964.

COHEN ON APSITHYRIA.

Some years ago Dr. Solis Cohen, of Philadelphia, reported, under the title of apsithyria, several cases in which there was complete inability to whisper, as well as aphasia, a condition to be carefully distinguished from that in which the inability to whisper is only apparent, and in which, on placing the ear close to the patient's mouth, or by using an ear-trumpet, a more or less feeble whisper can be detected. The author has recently returned to the subject in a paper in the *Philadelphia Medical and Surgical Reporter* of Nov. 10 and 17, 1883, and records another case of this rare affection. An unmarried lady, aged 40, was seen on Nov. 22, 1881. For fifteen months her voice and whispering power had been absolutely lost, the double infirmity compelling her to resort to tablet and pencil as her only means of personal communication. In Feb. 1879 she had suffered from pneumonia, which left her aphasic; for about eighteen months she had been able to talk in a whisper, but not since. Laryngoscopic inspection revealed paralysis of the arytenoid muscle, and of both lateral crico-arytenoids. The patient was debilitated, dispirited, languid, and hypersensitive; also very deaf. The treatment consisted in the internal administration of sulphate of strychnine in gradually increasing doses and in daily topical applications of currents of electricity to the paralysed muscles of the larynx, to some of the voluntary muscles of respiration, to the muscles of articulation, and to the region traversed by the pneumogastric nerves in the neck. In three weeks the ability to whisper was restored to such a degree, that the tablets were given away and have not been used since. At the end of about two months her voice began to improve, but would only reappear for a short time. After several relapses it was finally restored permanently. Apsithyria is usually found in females, but the author has seen it twice in the opposite sex. Once it occurred in a male religious fanatic, aged about 40, in whom aphasia and apsithyria had been complete for several months. One application of the interrupted current to the vocal cords cured the aphasia and apsithyria at once. The case was evidently hysterical. And once in a man aged above 30 years, who was not at all hysterical, and in whom the aphasia accompanying the apsithysia was due to paresis of the arytenoid muscles. This patient recovered under a tonic and electric treatment. In all cases which the author has seen, the ability to whisper was last lost and first regained. The aphasia with which apsithyria is associated is always, according to the author, due to a functional paresis and is not myopathic in origin. The apsithyria is apparently paretic too, he thinks; but where the seat of the paresis is, is uncertain. The author suggests that it is in the muscle of the diaphragm. It is not in the other muscles of involuntary respiration, for their functions exhibit no evidence of impairment; nor is it in the muscles of the tongue and lips, for voluntary control over these muscles is sufficiently well maintained. Voluntary expiration can usually, according to the author, be effected; but the expiratory current cannot be emitted with a force sufficient to make a sound. These patients, he says, seem to make an effort to whisper consciously and conscientiously, but they fail.

E. Cresswell Baber, M.B.

SURGERY.

RECENT PAPERS.

1965. Lister.—The Treatment of Fractures of the Patella. (*Brit. Med. Jour.*, Nov. 1883, p. 855.)

1666. Coppinger.—Fractured Patella. (*Lancet*, Dec. 1883, p. 955.)

1967. Bell.—Fractured Patella treated by Malgaigne's Hooks. (*Med. Times and Gazette*, Nov. 1883, p. 597.)

1968. Bellamy.—Removal of the Greater Portion of both Upper Jaw-bones, without External Incision. (*Med. Times and Gazette*, Oct. 1883, p. 452.)

1969. Golding-Bird.—Dislocation of the Jaw Reduced after Eighteen Weeks. (*Brit. Med. Jour.*, Nov. 1883, p. 877.)

1970. Naismith.—An Effective Apparatus for Symphyseal Fracture of the Lower Jaw. (*Lancet*, Dec. 1883, p. 988.)

1971. Fisher.—A New Splint for Fracture of the Fore-arm. (*Lancet*, Oct. 1883, p. 722.)

1972. Cross.—Incision in Arthritis. (*Brit. Med. Jour.*, Nov. 1883, p. 910.)

1973. Bishop.—Methods of Occlusion in Enterectomy. (*Brit. Med. Jour.*, Nov. 1883, p. 867.)

1974. Beatty.—Nævus treated successfully by the Local Application of Liquor Arsenicalis. (*Brit. Med. Jour.*, Nov. 1883, p. 1015.)

1975. Parker.—Spontaneous Inguinal Aneurism in a Boy. (*Brit. Med. Jour.*, Nov., p. 973.)

1976. Turner.—Wound of the Plantar Arch. (*Brit. Med. Jour.*, Nov. 1883, p. 976.)

1977. Macdonald.—A Case of Paracentesis of the Pericardium. (*Brit. Med. Jour.*, Oct. 1883, p. 819.)

1978. Parker.—Stricture of the Rectum. (*Brit. Med. Jour.*, Dec. 1883, p. 1067.)

1979. Cripps.—Two Cases of Advanced Fibrous Stricture of the Rectum treated by Proctotomy. (*Ibid.*, Dec. 1883, pp. 1120 and 1186.)

1980. Hutchinson.—High Amputations for Senile Gangrene. (*Ibid.*, Dec. 1883, p. 1192.)

1981. Annandale.—A Case of Encysted Vesical Calculus. (*Ibid.*, Dec. 1883, p. 1122.)

1982. Clark.—Obstruction of the Bowels treated by Abdominal Section. (*Lancet*, Oct. 1883, p. 678.)

1983. Don.—Rupture of the Plantaris Tendon. (*Lancet*, Dec. 1883, p. 946.)

1984. Boulley.—The Relations of the Bladder to the Abdominal Wall. (*Dissertation*, Paris, 1883.)

1985. Hacke.—Antiseptic Pleurotomy. (*Journ. de Méd. et de Chir. Prat.*, 1883.)

1986. Schmidt.—Urethritis in Mumps. (*Archives de Méd. Milit.*, 1883, Tome i.)

1987. Loreta, Prof.—Retrograde Divulsion of the Œsophagus and Pylorus. (*Gazz. Med. Ital. Lomb.*, Nov. 24, 1883.)

1988. Weir.—Corrosive Sublimate as an Antiseptic. (*Annals of Anatomy and Surgery*, October.)

1989. Riedel.—The Treatment of Gangrenous Hernia. (*Deutsche Med. Wochensch.*, Nov. 7).

1990. Reinhard.—The Treatment of Bed-sores in the Insane. (*Deutsche Med. Wochensch.*, Nov. 7).

1991. Blum.—Extirpation of the Spleen. (*Archives Gén. de Méd.*, June 1883.)

Art. 1965. *Lister on the Treatment of Fractures of the Patella.*—Sir J. Lister (*Brit. Med. Jour.*, Nov. 1883, p. 855), in a paper on the treatment of fracture of the patella, read before the Medical Society of London, begins by recording three cases of the united fracture of the olecranon in which the fragments were brought together by means of wires; and in one of them the wire was twisted, the ends being cut short and hammered down flat upon the bone, thus doing away with the inconvenience of a sinus, and allowing earlier movement of the joint than if the wire be not cut short, but allowed to come out through the wound. In the last three cases in which Sir J. Lister sutured the fragments together in the fractured patella, he cut the ends of the wires short and hammered them down, with most satisfactory results. Notes are given of seven cases in which the fragments were united by means of wire, and in all of them the results were most encouraging. The discussion which followed the paper is recorded in the *Brit. Med. Jour.*, Nov. 1883, p. 976. Mr. Bryant said he had no hesitation in accepting the principles of the treatment of Professor Lister, but did not quite agree with the author as to the nature of the cases in which such treatment was applicable. Mr. Bryant stated that the bulk of cases of simple fracture did well without the operation, but in cases where the limb was useless it was desirable to procure bony union by operation if the ordinary methods failed. Mr. Morris remarked that, from consideration of many cases, he had come to the conclusion that a short fibrous union was better than a bony one, that it was less likely to be refractured, and that it permitted an equally useful limb. Reference was also made to cases of bony union without resource to operative measures. Mr. Morris also pointed out that in 1861 Professor Cooper, of San Francisco (*vide Medical Digest*, Sect. 1763 : 5) proved that equally good success from wiring the patella could be obtained without the Listerian form of antiseptics. Sir Joseph Lister replied that he had not brought forward successful cases of suture of the patella in order to advocate this treatment in every case, but merely to show what could be done by the aid of antiseptics; and he concluded by strongly urging his hearers not to reject the advantages of antiseptic surgery in such necessary operations as ligature of arteries and removal of tumours.

1966. *Coppinger on Fractured Patella.*—Mr. Coppinger, at a meeting of the Academy of Medicine in Ireland (*Lancet*, Dec. 1883, p. 955), exhibited a specimen of osseous union in a patella, removed from a woman aged 63, who died three months after the injury from heart-disease. The close union of the fracture was attributed to an attack of inflammation of the parts in the neighbourhood of the patella. A discussion ensued, in which Mr. Lister's recent paper on operating for fractured patella was the main point alluded to. Dr. Mapother said he had never received a greater shock than when he read the address of Professor Lister, and remarked that for *astounding audacity* it exceeded anything he had ever conceived. Mr. Stokes remarked that he had not for many years experienced a keener sense of pleasure than was produced by reading Professor Lister's paper, as it recorded seven surgical results, which could only be characterised as brilliant, results which had hardly ever been equalled and never surpassed.

1967. *Bell on Fractured Patella treated by Malgaigne's Hooks.*—Mr. Royes Bell, in the *Med. Times and Gazette*, Nov. 1883, p. 597, draws attention to several cases of fractured patella treated by Malgaigne's hooks, under the care of the late Mr. Partridge, and reported in the *Med. Times and Gazette*, Feb. 15, 1868. Notes are given of two cases, which were said in 1868 to have been discharged from hospital, with bony union. One of these cases has turned up several times during the past year at King's College Hospital, suffering from effusion into one or other knee-joints (both patellæ having been fractured at different times). The fragments of the right patella (the one treated by hooks) are two inches apart; those of the left patella are five inches apart. Many cases like the above, which are discharged with so-called bony union, eventually re-appear with wide separation of the fragments.

1968. *Bellamy on Removal of the Greater Portion of both Upper Jaw-bones without External Incision.*—Mr. Bellamy, in the *Med. Times and Gazette*, Oct. 1883, p. 452, reports the case of a man, aged 58, who was suffering from extensive epithelioma invading the entire palate and both superior maxillæ. Under anæsthetics, Mr. Bellamy extracted the teeth of the upper jaw; he then performed Rouge's operation of detaching and raising the upper lip and nose from the superior maxillary bones; next, pressing a small stout saw into the nostril, he divided the hard palate. The soft parts were then dissected up from the bones. The removal of the rest of the diseased bone was effected by grasping with lion-forceps each lateral half, wrenching them aside and cutting away with Liston's forceps all the tissues which appeared to be diseased. Both superior maxillæ, as far as the orbital plates, were thus removed. Bleeding was arrested by the actual cautery. The patient made a good recovery.

1969. *Golding-Bird on Dislocation of the Jaw, Reduced after Eighteen Weeks.*—Mr. Golding-Bird (*Brit. Med. Jour.*, Nov. 1883, p. 877) reported a case at the Clinical Society of a sailor, aged 22, who sustained a double dislocation of the jaw whilst gaping. The patient consulted Mr. Golding-Bird four months after the injury, and attempts were then made to reduce the dislocation under chloroform. The position of the jaw was not improved, but adhesions were broken down, and the jaw rendered movable. A week later the operation was again attempted, and the right side was at last reduced; the left was then easily replaced, and direct pressure on the chin backwards brought the lower front teeth

into their normal position. In a few days, the patient was discharged from hospital cured.

1970. *Naismith on an Effective Appliance for Symphyseal Fracture of the Lower Jaw.*—Dr. Naismith, in the *Lancet*, Dec. 1883, p. 988, records the case of a young lady who sustained, among other injuries, fracture of the lower jaw through the symphysis, accompanied by a cut, about two inches long, just over the mental protuberance. The wound did not communicate with the fracture. An appliance was wanted to keep the jaw at rest, and also to permit free access to dress the wound. Dr. Naismith accordingly padded a Hodge's pessary, and fastened tapes to each end, so that two might go over the head and two round the neck. The pessary was then moulded to the chin, and answered admirably. The patient was much relieved, and good position of the fragments was easily maintained.

1971. *Fisher on a New Splint for Fracture of the Fore-arm.*—Dr. Henry Fisher, in the *Lancet*, Oct. 1883, p. 722, describes a new splint which he has invented for fractures of the fore-arm. It is made of Cocking's poroplastic felt, and shaped so as to fix the elbow and wrist. It requires no padding and no shaping. It can be obtained in six different sizes, and only requires a couple of ties—one above the wrist, the other near the elbow. Mr. Cocking manufactures the splints, and supplies agents in town or country.

1972. *Cross on Incision in Arthritis.*—Mr. Richardson Cross read at the annual meeting of the British Medical Association a paper on 'Incision in Arthritis' (*Brit. Med. Jour.*, Nov. 1883, p. 910). With regard to operations on the elbow-joint, anything short of excision results in ankylosis, for which excision will be eventually required. In the hip and shoulder amputation is rarely admissible, and excision gives good results. Disease of the astragalus usually requires amputation of the ankle. In the knee-joint only do practical operations seem to be followed by good results. In cases of granulo-fungous disease of a joint, it is specially important not to allow an abscess connected with the joint to burst through the skin; but the author prefers to make an incision into the abscess under antiseptic precautions, to fully explore the cavity with the finger, and to search carefully for caries, sequestra, or any other form of disease.

1973. *Bishop on Methods of Occlusion in Enterectomy.*—Mr. G. S. Bishop, in the *Brit. Med. Jour.*, Nov. 1883, p. 867, describes a new clamp for use in the operation of enterectomy, or the kindred operation of gastro-enterectomy. The clamp consists of a main screw right and left, carrying on it two clamps. These clamps are held open by springs, except when in use, when they can be screwed down as far as required in a second. Messrs. Mayer & Meltzer supply the instrument; and it is maintained that the use of this clamp will facilitate the operation of enterectomy, being less dangerous and more easily applied than the various methods which have hitherto been adopted.

1974. *Beatty on Nævus Treated Successfully by Liquor Arsenicalis.*—Mr. W. Beatty, in the *Brit. Med. Jour.*, Nov. 1883, p. 1015, notes that he has had great success in the treatment of nævi by the local application of arsenic. The preparation used is the ordinary liquor arsenicalis of the Pharmacopœia, with which the nævus is to be painted night and morning until ulceration takes place. The cure is effected in from three to five weeks.

1975. *Parker on a Case of Spontaneous Inguinal Aneurism in a Boy.*—Mr. R. W. Parker, in a paper read before the Royal Medical and Chirurgical Society (*Brit. Med. Jour.*, Nov. 1883, p. 973), reports a case of spontaneous inguinal aneurism in a boy, aged 12 years and 8 months, for which the external iliac artery was tied, under strict Listerian precautions, a carbolised silk ligature being used. The wound healed within a week, and the aneurism was cured. Thirty-four days after the operation severe epistaxis occurred and recurred, and the boy died of anæmia rather suddenly. At the necropsy, vegetations were found on the aortic valves, and the aortic orifice was narrowed. Mr. Parker gave a summary of all the hitherto recorded cases of spontaneous external aneurism in persons under twenty years. The table contains fifteen cases, including his own. In no fewer than eight of the patients there was disease of the valves, in two the heart was healthy, and in five the condition of the heart was not stated.

1976. *Turner on a Case of Wound of the Plantar Arch.*—Mr. G. R. Turner, in a paper read before the Clinical Society (*Brit. Med. Jour.*, Nov. 1883, p. 976), records the case of a boy, aged 10, who was admitted with a punctured wound of the sole of the foot, from a cut from glass two days previously. For ten days pressure was applied, and the bleeding was arrested. On the thirteenth day hæmorrhage recurred, and the wound was opened up to try to find the bleeding vessel, but without success; it was therefore decided to tie the posterior tibial artery. This was done, but the hæmorrhage still continued, and the dorsalis pedis was then tied. On the sixteenth day hæmorrhage again occurred, and was finally arrested by sponge-pressure after the application of the actual cautery. A discussion took place as to the best means of treatment to be adopted in such cases. Mr. Henry Lee regarded Mr. Turner's mode of treatment as safe, effectual, and rational. Mr. Heath expressed great faith in the efficacy of graduated pressure, with proper bandaging and elevation of the wounded limb, and leaving the limb undisturbed for at least a week.

1977. *Macdonald on a Case of Paracentesis of the Pericardium.*—Dr. J. W. Macdonald, in the *Brit. Med. Jour.*, Oct. 1883, p. 819, reports a case of a married woman, aged 30, who had suffered for three weeks before she sought assistance with severe pains in the joints and high fever. On examination, it was found that there was dulness over the cardiac region for a considerable area, with a loud to-and-fro murmur at the apex, and a harsh systolic murmur at the base of the heart. After applying blisters, iodine, and diuretics for some days, it was decided to aspirate the pericardium. Chloroform was given, and a small incision made at a point one inch below the nipple. No impulse being felt in the wound, a moderate-sized aspirating needle was thrust into the cavity, and after some delay a greenish-coloured fluid resembling bile escaped; the quantity drawn off was thirty-two ounces. The patient obtained rapid relief, and was convalescent in ten days.

1978. *Parker on Stricture of the Rectum.*—Mr. Rushton Parker, in the *Brit. Med. Jour.*, Dec. 1883, p. 1067, alludes to some articles that have lately appeared in some of the medical journals, where cancer of the rectum has been erroneously spoken of as if it were 'obstruction of the bowels.' The author records three cases, in which he wishes to point out that stricture of the rectum is not 'intes-

tinal obstruction,' though it is often *a cause* of 'intestinal obstruction.' Two of the cases are instances of malignant disease; the third occurred in an unmarried woman, aged 20, and was a case of simple stricture of the rectum. All the symptoms were removed, and the stricture apparently disappeared, on regulating the diet, and enforcing that defæcation was not to be attempted except after the use of a copious enema of hot water.

1979. *Cripps on Four Cases of Advanced Fibrous Stricture of the Rectum treated by Proctotomy.*—Mr. Harrison Cripps, in the *Brit. Med. Jour.*, Dec. 1883, pp. 1120 and 1186, records four cases in which he performed proctotomy for advanced fibrous stricture of the rectum. The first case was that of an unmarried girl, aged 20, who had suffered all her life from difficulty in passing her motions, and six months before she came under the author's hands had noticed that fæces came from the vagina. The condition of the patient induced Mr. Cripps to operate. An incision was first made in the stricture in the middle line behind, sufficiently to enable the finger to pass through, and then the bowel was transfixed above the stricture with a strong bistoury, the point of the knife emerging through the skin by the side of the coccyx. The knife was then made to cut its way out, thus dividing the whole of the intervening parts in the middle line to the posterior margin of the anus. The patient made a good recovery: her bowels were opened every day without difficulty, and the vaginal fistula closed. The second case recorded is very similar to the previous one. The third case occurred in a woman, aged 30, who had suffered for twelve months from great pain in defæcation, and a discharge of fæces from the vagina. Her condition was very grave, and her urine was loaded with albumen. Mr. Cripps watched the case carefully for some weeks, and then decided to operate, as he considered that most of the symptoms were aggravated by a very profuse discharge from the rectum. The operation proved very successful, but the subsequent history of the patient does not extend beyond three months. The fourth case was also that of a woman, aged 30, who steadily persevered, for a year after the operation, in using a full-sized bougie herself, with the result that no sign of stricture was left. In remarking on these cases, the author recommends the careful use of the olive-headed bougie as a means of diagnosing the nature and extent of the stricture.

1980. *Hutchinson on High Amputation for Senile Gangrene.*—Mr. Jonathan Hutchinson, in a paper before the Royal Medical and Chirurgical Society on high amputations for senile gangrene (*Brit. Med. Jour.*, Dec. 1883, p. 1192), began by urging the safety and expediency of amputating in these cases, if the operation were done at a good distance from the disease. In several very old patients, the author had not encountered the recurrence of gangrene excepting in one. Spontaneous cure was exceptional. The thinner the patient, the less probable was the risk of the amputation. In all the author's cases, Lister's precautions had been carefully carried out. A discussion took place after the reading of the paper. Mr. Hulke quoted a case in which he had seen recovery after gangrene had spread over all the foot and lower third of the leg. He was inclined to an expectant and conservative treatment. Mr. Savory said that the cases cited by Mr. Hutchinson were not instances of that dry condition which he regarded as characteristic of senile gangrene. Mr. Hutchinson replied to the various criticisms, and remarked that he could not agree with Mr. Savory's description of senile gangrene as that condition in which the limb dried up, as Mr. Hutchinson's experience taught him that nine-tenths of the cases of senile gangrene were of the moist kind and not the dry.

1981. *Annandale on a Case of Encysted Vesical Calculus.*—Mr. Annandale, in the *Brit. Med. Jour.*, Dec. 1883, p. 1122, records the case of a man, aged 73, who came under his care with signs of stone in the bladder. The patient had previously been sounded on many occasions, but no stone was detected. The author also sounded him very carefully in different positions, but never detected a stone. The patient at the time had almost recovered from a slight attack of hæmiplegia, and enjoyed good health, except that he suffered greatly from the vesical irritation. Mr. Annandale decided to explore the bladder by external incision, and opened the membranous portion of the urethra. After some time, a stone was detected in the base of the bladder, fixed to the wall. It was removed after some difficulty, bringing away portions of the mucous membrane with it. The wound was plugged with a tube, and the patient made excellent progress until the fifth day, when an attack of hemiplegia carried him off. The stone was composed of oxalate of lime, with a light coating of phosphates. It was one inch in diameter, and round in shape.

1982. *Clark on a Case of Obstruction of the Bowels treated by Abdominal Section.*—Mr. H. E. Clark, of Glasgow, in the *Lancet*, October 1883, p. 678, reports a case of obstruction of the bowels occurring in a man aged 32. On admission, on Feb. 2, 1883, there was a history of stoppage of the bowels for seven days. On Feb. 4 there was so much distension of the abdomen from gas that puncture was performed, affording great relief. Enemata were frequently given, but nothing was brought away. On Feb. 20, after colopuncture had been done on several occasions, laparatomy was decided upon. On opening the abdomen, an enormously distended portion of the bowel came into view; and by passing the hand into the pelvis, constriction was easily made out, occupying the lower part of the rectum. It then became evident that the distended portion was colon, and that this had become twisted by the sigmoid and descending portions passing round the upper part of the rectum. By twisting the enlarged portion, so as to make three half turns from right to left, the constriction was easily removed, and it was noted that no structural change had taken place in the portion of the bowel so constricted. The next question was, how to reduce the bowel so as to allow its being returned to the abdominal cavity? This was done by employing enemata by means of a Higginson's syringe; large quantities of olive-oil and warm water were used at first, but it was found that injections of very warm water alone proved most effectual in evacuating the fæces contained in the bowel. Eventually the intestines were returned, and the wound stitched up. The patient made a good recovery, leaving the hospital after five weeks.

1983. *Don on Rupture of the Plantaris Tendon.*—Dr. Don, in the *Lancet*, Dec. 1883, p. 946, records his personal experiences in a case resembling what is known as the 'lawn-tennis leg.' The author, whilst shooting over a turnip-field, turned round rather suddenly to run after a wounded bird, and felt as if he had received a violent blow over the left

calf. He managed to secure the bird with some difficulty, and then dragged himself to a house close by. On examining the leg, he found the calf much swollen. The spot where the blow was felt was tender on pressure, and situated exactly at the lower margin of the belly of the gastrocnemius. A strap was bound tightly round the leg, and enabled some degree of walking to be done. After four days, he began to walk a little on level ground, and about the twelfth day there was marked improvement. At the end of three weeks the bandage was left off, but throwing the weight of the body on the toes caused great pain. After six weeks, full power returned for walking on level ground. Dr. Don suggests that he ruptured the plantaris muscle, the place of rupture being at the tender spot.

RICHARD NEALE, M.D.

1984. *Bouley and others on the Relations of the Bladder to the Abdominal Wall.*—The relations of the bladder to the anterior abdominal wall have been recently studied by M. E. Bouley in his dissertation (Paris. 1883), and were the subject of an animated discussion at the Société de Chirurgie with reference to an operation of suprapubic lithotomy performed by M. Després. There was much difference of opinion about the musculi pyramidales, which are considered by Després as an important landmark in the operation, while M. Marc Sée lays great stress upon their frequent variations in size and situation. According to M. Bouley, these muscles are sometimes found wanting on one or both sides ; or there may be two on one side and one or none on the other. Their size also is very variable. The second moot point is that of the relations of the prævesical cul-de-sac of the peritoneum to the upper border of the symphysis pubis. A careful dissection of thirteen bodies has led M. Bouley to the following conclusions. When the apex of the bladder is situated 9 to 13 centimètres higher than the symphysis, the height of the peritoneal fold above the same point can be found by deducting 4 centimètres from those numbers. When the bladder reaches 5 to 9 centimètres above the symphysis pubis, 3 centimètres must be deducted. It is, however, essential to remember that the peritoneal fold stands relatively higher in fat than in thin people. M. Bouley has also repeated the experiments of Petersen, who had the idea of raising the peritoneal *cul-de-sac* above the symphysis by means of an India-rubber ball introduced into the rectum and distended by water ; this process seems to answer well, especially in fat people. It is necessary to inject 400 to 600 grammes (about 1 pint) of water.

1985. *Hacke on Antiseptic Pleurotomy.*—According to M. Hacke (*Jour. de Méd. et de Chir. Prat.*, 1883), the best way of performing the operation consists in making a free incision into the pleural cavity, so as to give exit to the pus ; the cavity must then be washed out with an antiseptic fluid. In ordinary cases a weak solution must be used ; but when the pus is decomposing, strong solutions of boracic acid (7 per cent.), chloride of zinc (1 to 5 per cent.), or acetate of alumina (5 per cent.), are to be preferred. A drainage-tube of the size of the little finger must then be introduced, and the dressing applied. This consists of crumpled gauze, cotton-wool, and mackintosh ; and must cover the whole half of the trunk. The first dressing must be changed after twenty-four and the second after forty-eight hours. Injections into the pleural cavity are only called for when the discharge is decomposing, or when it remains purulent after eight days. Partial excisions of one or more ribs may be useful in the latter stages.

1986. *Schmidt on Urethritis in Mumps.*—In a case of mumps, the author (*Arch. de Méd. Milit.*, 1883, tome i., p. 112) observed on the third day a discharge from the urethra, which lasted the same time as the swelling of the parotid gland. There was no orchitis, and the patient had not exposed himself to contagion. The discharge was ascribed to a specific inflammation of Cooper's, Mery's, and Littré's glands. J. S. KAESER, M.D.

1987. *Loreta on Retrograde Divulsion of the Œsophagus and Pylorus.*—On Oct. 24 last Professor Loreta (*Gazz. Med. Ital. Lomb.*, Nov. 24, 1883) performed, in the surgical clinic of Bologna, a new and important operation—retrograde divulsion of the œsophagus. The patient was suffering from stricture at the lower third of the œsophagus, produced by extensive cicatrisation, the consequence of swallowing caustic potash. The site, nature, and degree of the stricture were such as to render useless any operation undertaken by way of the mouth. The stage of starvation to which the patient was reduced, by the impossibility of taking sufficient nourishment, was profound. Gastrostomy was performed, and a passage secured to introduce the dilator into the stomach ; the instrument was thence pushed up the œsophagus, and the stricture thoroughly dilated. The operation lasted about half an hour, and was most successful ; on the first day the patient was able to swallow food easily. The incisions united by first intention ; there were no signs of peritonitis, and on the fourteenth day the patient was well. The sound passed without difficulty, and in all probability its periodical employment will render the cure permanent. On Nov. 4 Professor Loreta also performed successfully divulsion of the pylorus in a woman, aged 26. G. D'ARCY ADAMS, M.D.

1988. *Weir on Corrosive Sublimate as an Antiseptic.*—Dr. Robert F. Weir, of New York, in a contribution to the *Annals of Anatomy and Surgery*, Oct. 1883, on 'the weak points in a Lister's dressing and the advantages of corrosive sublimate as an antiseptic,' states that it must be admitted by the most devoted of the advocates of Listerism that the dressings, even when applied with the strictest attention to all the details of this system, not unfrequently fail to control the progress of putrefaction. His first experience of corrosive sublimate as a dressing for wounds was obtained after reading an excerpt from an article by De La Croix (*Archiv für Experiment. Pathologie*, Band xiii., Heft 3 and 4), in which it was stated that corrosive sublimate, in the proportion of one part to 2,525 parts of water, was an efficient germicide. In the spring of 1882, Dr. Weir used this salt in one part to 2,000 parts of water as a dressing to three compound fractures of the thigh and six of the leg, with very satisfactory results. Subsequently, some slight modifications were made in the application of this agent. It had been proved that the strength was insufficient, active bacteric life having been at times found under the dressing. The large experience of Kümmell and Schede, of Hamburg, had proved that a stronger solution was required, and that the salt could be used in larger proportion without causing any toxic effects. According to Kümmell, with the use of sublimate dressings the healing of wounds is accomplished with a certainty and uniformity unknown under the

strictest Listerian dressing. Dr. Weir's own observations of the efficacy of the sublimate dressing, since he learnt the correct method of using it, have been but comparatively slight. He has applied it in four cases of necrosis of the foot and tibia, one of amputation at the hip-joint, one of amputation in the thigh, one of amputation in the leg, one of amputation at the knee, one of amputation of the breast, two of removal of tumour, one of fixation of a movable kidney, one of extensive laceration of the thigh, one of subdeltoid bursa, and three of compound fracture of the leg. There was recovery in all these cases except that of laceration of the thigh, which terminated fatally on the twelfth day through septicæmia. In two of the cases of compound fracture, the antiseptic condition was not preserved. No special local effects were produced beyond, in one instance, slight pustulation of the adjacent skin. No constitutional effects were noticed in any of the cases.

W. Johnson Smith.

1989. *Riedel on the Treatment of Sloughing in Hernia.*—The *Deutsche Med. Wochensch.* of Nov. 7 quotes a lecture delivered by Dr. Riedel, of Aix-la-Chapelle, on the treatment of gangrenous hernia. He recommends that the gangrenous portion of intestine should be withdrawn from the sac, attached to the thigh by a few stitches, and then drained of its contents by a tube passed into the central portion of the bowel. After an interval, not exceeding twenty-four hours, during which the intestine should be kept moistened with naphthaline, resection of the gangrenous portion is proceeded with, without chloroform, and the external wound is carefully closed. The first part of the operation can be undertaken by any surgeon, and the patient thereby brought into a condition in which he may be safely transported within reach of more skilful aid.

1990. *Reinhard on the Treatment of Bed-sores in the Insane.*—The *Deutsche Med. Wochensch.* of Nov. 7 reviews a paper by Dr. Reinhard, of Hamburgh, on the employment of permanent baths in the treatment of bed-sores in the insane. The patient is laid on a cloth, which is suspended in a bath filled with water at the temperature of 30° to 31° R. (99°·5 to 101°·75 F.), to which some carbolic acid or naphthaline has been added. When the bath is covered in by an impermeable cloth, the temperature does not sink more than 2°·5 R. (5°·5 F.) in twelve hours.

Alice Ker, M.D.

1991. *Blum on Extirpation of the Spleen.*—Dr. Albert Blum contributes a paper on this subject to the *Archives Gén. de Méd.* for June. He gives a brief detail of seventeen cases of splenotomy consecutive to wounds of the organ, and remarks that in all these instances recovery followed; and that no unfavourable symptoms that could be attributed to the loss of a more or less considerable portion of the viscus were observed. In splenotomy performed in cases of tumour of the organ, the result was very different. Dr. Blum reproduces Credé's table of thirty cases of extirpation of the spleen, with the addition of the weight of the organ upon its removal; and, when possible, the time elapsing in the fatal cases between the operation and death. In six out of these thirty cases the operation was successful. Two of these were cases of cystic disease, and four cases of hypertrophy. Extirpation of a leukæmic spleen was fatal in all cases. The author's conclusions are these. When, in consequence of a wound in the region of the spleen, there is a hernia of it, the surgeon would be justified in removing the prolapsed portion. All the observations relating to cases of this kind indicate the harmlessness of the operation, and its termination in recovery. In diseases of the spleen, extirpation is contra-indicated in cases of cancer, or of hypertrophy, symptomatic either of an hepatic affection or of paludal intoxication. The results of surgical intervention in such cases have been deplorable. Cysts of the spleen are curable by much easier or less dangerous means than extirpation. In cases of movable spleen, the operation may be indicated if the symptoms be serious. In fine, at the present day, it may be affirmed that splenotomy is practicable in the human subject without altering the condition of health. The operation is only very exceptionally indicated; it is difficult to conduct to a favourable termination, and there are great chances of its terminating rapidly in death, due to hæmorrhage or to traumatic shock.

MEDICINE.

RECENT PAPERS.

1992. Mejia, Dr. D.—Abscesses of the Liver. (*Revista Medico-Quirurgica de Mexico*, Oct. 10, 1883.)

1993. Ferrer, L.—Pernicious Fever of Meningeal Form. (*El Genio Med.-Quirurg.*, Aug. 7, 1883.)

1994. De Giovanni.—Clinical Observations on the Heart in Pneumonia. (*Gazz. Med. Ital. Prov. Venete*, and *Annali Univ. di Med.*, Nov. 1883.)

1995. Silvestrini.—Considerations on the Course of Fever in Acute Croupous Pneumonia. (*Revista Clinica*, and *Annali Univ. di Med.*, Nov. 1883.)

1996. Petrone, Luigi.—On Interstitial Chronic Idiopathic Hypertrophic Myocarditis. (*Lo Sperimentale*, and *Annali Univ. di Med.*, Nov. 1883.)

1997. Arigo and Costa.—An Unusually Low Temperature Existing for Eight Days before Death in a Case of Uræmia. (*Gazz. Med. Ital. Lomb.*, Nov. 24, 1883.)

1998. Lahillonne.—The Use of the Sphygmograph in the Treatment of Chronic Bronchitis. (*Gaz. Méd. de Paris*, Dec. 1883.)

1999. Deschamps.—Pulmonary Complications of Erysipelas. (*Gaz. Hebdom. de Méd. et de Chir.*, Dec. 1883.)

2000. Buret.—Diagnosis of Floating Kidney. (*Gaz. Méd. de Paris*, Dec. 1883.)

2001. Lecointre.—The Treatment of Aneurism of the Aorta. (*Rev. de Thérap.*, Jan. 15.)

2002. Anderson.—Obscure Cases of Aneurism of the Aorta. (*Lancet*, Nov. 1883, p. 805.)

2003. Lawrence.—The Genesis of Typhoid Fever from Cattle-manure in the Cape Colony. (*Ibid.*, Dec. 1883, p. 984.)

2004. Harrison.—Prostatic Gout. (*Ibid.*, Nov. 1883, p. 896.)

2005. Granville.—Choreic Cough. (*Med. Times and Gazette*, Nov. 1883, p. 584.)

2006. The Less Obvious Symptoms of Gastric Ulcer. (*Ibid.*, Nov. 1883, p. 546.)

2007. Packer.—A Case of Gastric Ulcer with Unusually Severe Hæmorrhage. (*Brit. Med. Jour.*, Dec. 1883, p. 1062.)

2008. Salter.—The Mode of Transmission and Period of Incubation in Diphtheria. (*Ibid.*, Dec. 1883, p. 1065.)

Art. 1990. *Mejia on Abscesses of the Liver.*—The author's observations (*Revista Medico-Quirurgica de Mexico*, Oct. 10, 1883) confirm the common experience that abscesses of the liver are most commonly situated in the right lobe, and in the posterior border

of this lobe especially. Abscesses of the superior surfaces of the liver are marked by severe pain of the right shoulder, while those on the concave or inferior surface give rise to disturbances of the digestive functions. Those large abscesses which occupy a considerable part of the thickness of the organ, are accompanied by both symptoms—pain in the shoulder and digestive disturbances. Bearing in mind the frequency of abscess on the posterior border, and the tendency to open spontaneously into the bronchi, careful percussion, marking the limit of dulness, may afford a guide as to where incision should be made. The co-existence of pain in the shoulder and digestive perturbation, without dulness of determined form, but with the presence of the well-known symptoms of abscess, authorises us in making an incision, directing it towards the centre of the organ. As to whether hepatic abscess is susceptible of spontaneous cure, he quotes a case in which he found on *post mortem* an osteo-calcareous mass, due apparently to an hepatic abscess cured by cretification of its walls. In true hepatic abscess, jaundice is always wanting. Incision should be practised when the line of dulness reaches or passes the nipple, and in many cases is best made behind the nipple line.

1993. *Ferrer on Pernicious Fever of Meningeal Form.*—A boy aged 16, of good family and personal history (*El Genio Med.-Quirurg.*, Aug. 7, 1883), was attacked by fever on May 29. The symptoms at first were mild; the pulse was 100, temperature 38°·2 C. (100°·75 F.). On the 31st, when seen, he presented all the symptoms of acute meningitis; pulse 120, respiration irregular, temperature 40°·2 C. (104°·35 F.). The tongue was clean and red; he had vomiting; and his urine was passed involuntarily; he had violent delirium; the eyes were injected, the pupils fixed; leeches were applied behind the ears, and a purgative enema given. At midday, though the delirium continued so violent that it took four men to keep him in bed, the temperature had fallen 2° C. Profuse sweating began. At 1 A.M. the symptoms remitted, and the patient for a short time was able to answer questions. The pupils acted to light and were dilated; the pulse was better, 98, and the temperature 37°·5 C. (99°·5 F.). Four decigrammes of quinine were given hypodermically (equal to 3 grammes by the mouth), and an enema containing 15 decigrammes was administered at the same time. Unhappily, there was no time for the medicine to exert its influence. At 2 A.M. the temperature began to rise, reaching 39°·5 C. (103·6 F.), the delirium became again violent, with attacks of tonic convulsions; the pupils were widely dilated; urine and fæces passed involuntarily. These symptoms lasted until 4 A.M., giving place to profound exhaustion, the patient sinking at 8 P.M.

1994. *De Giovanni on the Heart in Pneumonia.*—As a general rule (*Gazz. Med. Ital. Prov. Venete*, and *Annali Univ. di Med.*, Nov. 1883) the heart in pneumonia is increased in volume, but this increase varies in different cases in extent, time, and mode of origin. The nervous system is an important factor, although not the only one, in the variations of the cardiac area. By hastening or retarding the movements of the heart, it influences the general circulation; and by its action in dilating or contracting the vessels, it affects the local circulation, and also influences the temperature of the body by now checking and now encouraging the radiation of heat. The author combats the opinion that the fever follows faithfully in its oscillations the morbid process. Elevation of temperature does not invariably correspond to a new extension of the inflammation. The variations of the cardiac area often coincide with modifications of the nervous system and with fall of temperature; nervous depression, often with general prostration and profuse sweating, favours dilatation of the heart. In the thirty cases of pneumonia examined by the author, increase of the cardiac area was found in all. The heart may be dilated, and persist so throughout, or may offer oscillations in the course of the attack. In the majority of cases, the cardiac area is increased by dilatation of the right heart, but there is sometimes a general dilatation. Although the embarrassment to the circulation in the lung may be very great, the right heart does not always dilate in proportion to the obstruction to the pulmonary circulation, but may remain almost in the normal state; and from this it is seen that it is not the increase of the intracardial pressure only which causes the dilatation. In each case, the share which the embarrassment of the circulation, the general and the local nervous function, and the original cardiac organisation, take in its production, must be determined by exact study of the dilatation. The liver is also generally enlarged, and its increase may precede or follow that of the heart. The author insists on the great practical utility of these researches. If the cardiac dulness increase, there being no great embarrassment to the circulation in the lung, the resistance of the heart is not of the best, either from original want of activity in the left ventricle, or from depression of the general innervation, or from gastro-hepatic complication. From the knowledge of the cardiac dilatation, one can foretell that the patient is not going to do well, even if the other symptoms do not show it, and can draw valuable conclusions as to treatment according to the factors producing the dilatation.

1995. *Silvestrini on the Course of the Fever in Acute Croupous Pneumonia.*—Pneumonia is generally divided into three periods, numerous variations being however admitted, and to each period a special course of fever corresponds. According to the author (*Revista Clinica*, and *Annali Univ. di Med.*, Nov. 1883) this division is an error. There are cases of pneumonia which run their course in three days, others in much more; and the temperature follows in its behaviour the various phases of the morbid process. The temperature-curve is irregular even in cases of frank pneumonia following a typical course; if the temperature be taken every two hours, oscillations are noticed which escape observation if the thermometer be only used twice a day. The author records cases in which objective examination and consideration of the thermic curve showed that rise of temperature always coincided with the appearance of a new pneumonic nucleus, and diminution or cessation of fever with the appearance of the signs of hepatisation. At this moment, when the exudation coagulates, a compression is produced between alveolus and alveolus, and arrest of the blood and lymphatic circulation, and hence absorption of the pyrogenic products of inflammation is prevented. Fever only accompanies the period of exudation, during which the absorption of the pyrogenic products is facilitated; every elevation of temperature corresponds to a new invasion of the process, the pneumonia being considered as the union of so many pneumonic processes, which succeed one another with greater or less rapidity in different

cases; and this succession of accesses goes *pari passu* with the oscillations of the thermic curve. The duration of the morbid process is short, the succession of anatomo-pathological periods rapid; but the nature of the process is to diffuse itself in other territories, where the same phenomena are developed, capable of producing the same manifestations. If the invasion take place quickly, there will be almost continuous fever; if slowly and interruptedly, the fever will have a more or less regularly intermittent type. If the pneumonia invade one tract only of the lung, and be arrested there, it will give rise to symptoms only lasting one day or two; if the process invade gradually all parts of a lung, there will be fever of long duration. The diffusion of the morbid process is by the bronchi, and not by lymphatic absorption or contiguity. If the diffusion took place by contiguity, those cases in which the process invades irregularly various zones of the lung could not be explained. The author gives two cases, in which the pneumonia invaded first the superior lobe of one side and then that of the other. This manner of diffusion has given rise to the belief in the infective nature of the disease; but the infectivity must be restricted to epidemic cases only, and to the forms which arise during the course of an infective malady. A lobule, or a given group of lobules, is seized with an inflammatory process, giving rise to a copious liquid intra-alveolar exudation, which, if it have not originally specific properties, easily acquires them. This exudation, issuing from the smallest bronchi, reaches the nearest bronchial ramification going to another tract of lung, and thus gives rise to the same process in other alveoli. The disease may thus continue its progress, until either by deficiency of inflammatory products, or by their rapid coagulation, expectoration ceases. The diffusion of the process would be thus influenced by the fluidity of the exudation, by the diminution of the bronchial sensibility, or by alteration of the vibratile epithelium, all which would facilitate the passage of the exudation from one part of the lung to another. The supine position which the patients necessarily keep facilitates the descent of the exudation into the most dependent (posterior) parts, and this explains the facile diffusion of the pneumonia in the posterior inferior parts.

1996. *Petrone on Interstitial Chronic Idiopathic Hypertrophic Myocarditis.*—A man, aged 35, admitted after six months' illness, had not suffered from rheumatism, presented œdema of the ankles, moderate dyspnœa, cough and mucous expectoration; small, weak, quick pulse; sounds and impulse of heart feeble; liver enlarged. After a month's treatment with digitalis, quinine, &c., all these symptoms improved; but they soon returned in an aggravated form, with progressive enlargement of the cardiac dulness, pulmonary congestion and œdema, and a systole. *Post mortem*, there was found to be hypertrophy of the heart, especially of the left side; the orifices and valves were healthy; the peripheral vessels were not atheromatous; the aorta was slightly atheromatous. On section, the cardiac muscle was normal in colour and hardness; examined histologically, the connective tissue separating the fasciculi of muscle-fibres was considerably increased. These fibres were so resistant, that with the forceps it was possible to detach the muscular elements and to isolate the connective stroma. This tissue appeared so developed as to form extensive fibrous plates of various configuration, in the midst of which were seen the muscular fibres in various stages of atrophy. In the centre of each patch was found a small artery, surrounded by connective tissue, and radiating towards the periphery; the artery presented all the characteristics of endoperiarteritis obliterans. This history shows, according to the author (*Lo Sperimentale*, and *Annali Univ. di Med.*, Nov. 1883), that there exists a primary isolated cardiac cirrhosis, without renal lesion; the cause of this myocarditis being a diathesis, probably determined by cold and damp or alcoholism. The author quotes the opinion of Rigal, according to whom the alterations produced by the diathesis or intoxication (tobacco, gout, rheumatism, alcoholism, or lead-poisoning) are manifested primarily in the small arteries and capillaries of the cardiac muscle. The suppressed elasticity of these vessels creates an obstacle to the movement of the heart, and hence the hypertrophy. This hypothesis is probable, but not certain. The diathesis may display its influence both on the interstitial connective tissue of the heart-muscle and on the arterial walls, the hypertrophy being the effect of the diffused sclerosis of the myocardium. Certain symptoms render the diagnosis of this form of sclerosis possible: hypertrophy, weakening of the systole, absence of murmurs, disproportion between the enlargement of the area and the weakness of the cardiac impulse and radial pulse, the impossibility of deciding for any other disease of the heart, the absence of polyuria, attacks of pulmonary congestion which (as Rigal admits) depend on vaso-motor paralytic disturbances, slight dropsies, which disappear to reappear quickly, and the absence of albuminuria. Joined to a systole, it is impossible to distinguish it from other heart-disease. Treatment is impotent against this form, which inevitably leads the heart-muscle to progressive degenerative atrophy.

1997. *Arigo and Costa on Unusually Low Temperature existing for Eight Days before Death in a Case of Uræmia.*—The patient, a man aged 35, was admitted with symptoms of uræmic poisoning; the temperature in the axilla was 35° C. (95° F.). The temperature gradually fell, and for forty-eight hours before death was below 33° C. Until the day before death, the patient could be roused to answer questions. G. D'Arcy Adams, M.D.

1998. *Lahillonne on the Use of the Sphygmograph in the Treatment of Chronic Bronchitis.*—In a work reviewed by the *Gaz. Méd. de Paris* for Dec. 1883, the author insists upon the advantages of sphygmographic observations in the treatment of chronic bronchitis by sulphurous water. He has repeatedly observed a remarkable increase of the arterial tension and a corresponding amendment of the symptoms of bronchitis under the influence of the Cauterets water. The good effect was visible even in patients suffering from cardiac affections, which do not, in his opinion, contra-indicate the use of sulphurous waters.

1999. *Deschamps on the Pulmonary Complications of Erysipelas.*—According to the author (*Gaz. Hebdom. de Méd. et de Chir.*, Dec. 1883) erysipelas may spread along the lining membrane of the bronchial tubes and of the pulmonary alveoli, and this is called by him broncho-pulmonary erysipelas. In other cases erysipelas may, like other infectious fevers, cause a pulmonary inflammation which is constitutional, and not local, in its origin. The two forms can be distinguished by their mode of onset.

2000. *Buret on the Diagnosis of Floating Kidney.*—In the opinion of the author, whose work is reviewed in the *Gaz. Méd. de Paris* for Dec. 1883,

few affections are so often the cause of errors in diagnosis. This may be explained chiefly by the extreme variability of the symptoms which can simulate those of every painful affection of the abdomen, and also hysteria and hypochondriasis, especially when no tumour can be felt. Buret quotes a case of intractable gastralgia which was cured by the use of an abdominal belt, and others where lead colic and uterine disease had been diagnosed. When the floating kidney can be felt through the abdominal wall, it may be mistaken for a cyst, an abscess, a cancerous tumour, or a distended gall-bladder; but many errors will be avoided by bearing in mind the frequent occurrence of a movable kidney.

2001. *Lecointre on the Treatment of Aneurism of the Aorta.*—In his graduation thesis, reviewed by the *Rev. de Thérap.* for Jan. 15, the author recommends the use of iodide of potassium at a dose of 1¼ to 4 grammes daily; digitalis may be advantageously combined with it in some cases, and the addition of some extract of opium prevents the unpleasant effects of iodism. The cough, dyspnœa, and dysphagia soon diminish, and the tumour shrinks to some extent, but the treatment must be continued for about six months. J. S. Kaeser, M.D.

2002. *Anderson on Obscure Cases of Aneurism of the Aorta.*—Dr. McCall Anderson, in the *Lancet*, Nov. 1883, p. 805, directs attention to the fact that intrathoracic aneurisms often prove fatal without giving rise to any positive direct symptoms. In some cases of aneurism there is a striking difference in the radial pulses, especially when a tracing is taken with the sphygmograph, although in some cases an abnormality in the distribution of the arteries, or some other cause, such as contraction of the lung in phthisis, may cause a difference in the radial pulses. Notes of cases are given where aneurisms proved fatal with very few symptoms pointing to their existence.

2003. *Lawrence on Genesis of Typhoid Fever from Cattle-manure in the Cape Colony.*—Mr. Lawrence, in the *Lancet*, Dec. 1883, p. 984, brings forward evidence to support a theory that typhoid fever is conveyed for the first time to man from bovine cattle. Notes are given of several instances. Amongst these it will be found that five cases occurred in two houses in the same village, but some distance apart; no other house was attacked; but these two houses had one circumstance in common, and this did not apply to the rest of the village—namely, the presence of a cattle-inclosure close to the dwellings, occupying in each case the space between the house and the open watercourse. Another remarkable instance is given, of three men who went on a waggon journey together. A few days after their return to their homes they were all laid up with typhoid, although their homes were a considerable distance apart, and no other members of the family were affected. The men during their journey drank water from a stagnant cattle-pool. The cases given tend to show that the presence of cattle-manure in sufficient quantity to infect air or water was *primâ facie* the cause of the outbreak. In no case could an outbreak be ascribed to infection from sheep or horse manure. [A series of highly interesting papers on the *de novo* origin of typhoid fever may be consulted by reference to sect. 1492 : 2 of the *Medical Digest.*]

2004. *Harrison on Prostatic Gout.*—Mr. R. Harrison, in the *Lancet*, Nov. 1883, p. 896, draws attention to the occurrence of gouty prostatitis in patients who, though having a gouty diathesis, have previously remained free from the more ordinary attacks of this disorder. The patient generally suffers intensely at night, but during the day the symptoms abate, to recur at night. The attacks do not last long, but generally merge into a chronic form. When the prostate becomes chronically affected, there is difficulty in emptying the bladder, owing to the pain at end of micturition, and there is also generally some urine retained in the bladder. The difference between cases where the prostate remains tender and those of hypertrophy of the gland from other causes, is that in the former the use of the catheter aggravates the disease, but medicines relieve; in the latter, the catheter is the best treatment that can be adopted, whilst medicines have little or no effect. The treatment advocated in the cases due to a gouty diathesis is very simple. Iodide of potassium internally, and a mild form of counter-irritation to the perinæum, will often relieve the prostatic tenderness. This diathesis is also largely benefited by some spas, and by attention to suitable diet. Carlsbad water is an excellent beverage.

2005. *Granville on Choreic Cough.*—Dr. Mortimer Granville, in the *Med. Times and Gazette*, Nov. 1883, p. 584, offers a few remarks on a kind of cough met with chiefly among females between the ages of fifteen and twenty, characterised by a peculiarly metallic ring, either 'cracked' or 'whistling,' during the indraught, and often producing in the intervals of the paroxysm 'hoarseness,' 'squeaking,' or 'loss of voice.' The fault is irritation of the recurrent laryngeal nerve, and it very often happens that the pneumogastric sympathises, giving rise to gastric disturbance, or to feelings of 'faintness' and 'palpitation.' These troubles favour the occurrence of nutritive changes in the bronchial membrane and submucous tissue, which induce a low inflammatory action, and produce a deposit of tuberculous lymph, and may end in death. The only method of treatment in these cases which proves valuable is to paint over the course of the pneumogastric nerve, or along the anterior edge of the sterno-cleido-mastoid (which is near enough), with liquor vesicatorius or glacial acetic acid. The application is to be repeated in a fortnight if the symptoms do not abate.

2006. *The Less Obvious Symptoms of Gastric Ulcer.*—In the *Med. Times and Gazette*, Nov. 1883, p. 546, the following remarks on the less obvious symptoms of gastric ulcer occur. In cases of gastric ulcer, it does not appear necessary for the pain to be *severe*; many cases of pain between the shoulders at a certain definite spot, or, more rarely, of a similar pain at the epigastrium, if properly inquired into, will give a history of vomiting of blood at some time or other, and this may be only of so slight a character that the patient does not mention it. Many cases, however, of gastric ulcer occur without hæmorrhage, as is especially shown by the rapidly perforating ulcers in the anterior wall of the stomach, unchecked in their fatal course by any adhesion to other organs. One practical aid in the diagnosis of the obscurer cases is the condition of the tongue, which is rarely coated or furred in cases of gastric ulcer, but is markedly so in cases of gastritis. As to treatment, nothing succeeds so rapidly as perfect rest to the stomach.

2007. *Packer on a Case of Gastric Ulcer with Unusually Severe Hæmorrhage.*—Dr. W. H. Packer,

in the *Brit. Med. Jour.*, Dec. 1883, p. 1062, reports the case of a nurse, aged 23, who had suffered from dyspeptic symptoms for over twelve months, but had not been under any special treatment as regards diet. One day she was reported to have spat up blood, and the same night she suddenly brought up about three-fourths of a pint. The patient was now blanched and almost pulseless, and thirty minims of turpentine were at once administered, together with ten grains of gallic acid and fifteen minims of sulphuric acid every quarter of an hour. No further hæmorrhage ensued, and, after about four hours, opium was given in one-grain doses, repeated every three hours. For two days the patient was free from hæmorrhage, although constantly vomiting; and as she complained greatly of pain after an enema of beef-tea, she was fed only by the mouth. The opium, gallic acid, &c., were given as before, and no further hæmorrhage occurred for forty-eight hours, when it again came on, and rendered her very prostrate. For some hours there was slight improvement, but, the vomiting of blood again recurring, peptonised enemata were insisted upon; these were continued for a whole week, during which time the patient had several attacks of bleeding, but the later part of the time an ounce of brandy was added to each enema instead of giving opium. This seemed to mark the outset of improvement, and, after a few days, food was able to be retained by the stomach, the patient recovering in about a month.

2008. *Salter on the Mode of Transmission and Period of Incubation in Diphtheria.*—Mr. J. H. Salter, in the *Brit. Med. Jour.*, Dec. 1883, p. 1065, records notes of an outbreak of diphtheria under the following circumstances. A woman, having a child ill with diphtheria, took some needlework she had been doing to a farmhouse, healthily situated and isolated. Three days afterwards, one of the children at the farmhouse commenced ailing, and on the fifth day from the woman's visit Mr. Salter pronounced that the child had diphtheria. The next morning, another child showed signs of the disease. The following day the housemaid was attacked, on the following day the cook, and two days later another servant. No other case occurred in the neighbourhood, except a second child of the needlewoman. The first child that was ill had just returned from a visit at a distance where diphtheria was rife.

RICHARD NEALE, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

2009. VIDAL.—The Treatment of Phagedænic Chancre by Pyrogallic Acid. (*Bull de Méd Gén.*, Nov. 1883.)

2010. THE BARON DE THERESOPOLIS.—On Sea-Sickness. (*Bull. de Méd. Gén.*, Nov. 1883.)

2011. GUYON.—On the Treatment of Chronic Urethritis. (*Bull. de Méd. Gén.*, Nov. 188 3.)

2012. FAMECHON.—The Treatment of Pyæmia.

2013. Peculiar Symptoms Caused by Long-continued Inhalation of Chloroform. (*Jour. de Méd. et de Chir. Prat.*, 1883.)

2014. TOPORSKY.—Perchloride of Mercury as a Disinfectant. (*Centralbl. für Gynäk.*, Band ix.)

2015. SCHILLING.—The Combination of Ergot of Rye with Salicylate of Soda or Sulphate of Quinine. (*Rev. Médicale*, Jan. 19)

2016. DUJARDIN-BEAUMETZ. — The Treatment of Chronic Alcoholism by Strychnia.—(*Bull. Génér. de Thérap.*, Jan. 15, 1884.)

2017. KING.—The Treatment of Ague. (*Lancet*, Dec. 1883, p. 1028.)

2018. PADLEY.—Idiopathic Anæmia, and its Successful Treatment by Arsenic. (*Ibid.*, Nov. 1883, pp. 811 and 849.)

2019. AMSDEN.—Rattlesnake Venom in the Treatment of Tetanus. (*Med. Times and Gazette*, Nov. 1883, p. 606.)

2020. NICHOLSON.—The Coagulating Power of Turpentine. (*Ibid.*, Nov. 1883, p. 543.)

2021. ANDERSON.—Santonine as a Remedy for Gleet. (*Lancet*, Nov. 1883, p. 845.)

2022. BOULTON.—Colourless Iodine. (*Ibid.*, Nov. 1883, p. 845.)

2023. BRAITHWAITE.—Infusion of Digitalis in Cardiac Dropsy. (*Ibid.*, Nov. 1883, p. 855.)

2024. SNOW.—Hypericum for the Prevention and Treatment of Bed-Sores. (*Brit. Med. Jour.*, Dec. 1883, p. 1125.)

2025. PONOMAROFF.—The Use of Cow-Koumiss in Infants. (*Archiv für Kinderheilk.*, Band v., Heft 1.)

2026. RANDOLPH AND ROUSSEL.—The Presence of Cod-Liver Oil in the Fæces after Inunction. (*Philadelphia Med. Times*, Dec. 29, 1883.)

2027. ALBERN, V. M.—The Lemon in Paludism. *El Siglo Medico*, Nov. 11, 1883.)

2028. GRANIZO, F.—The Treatment of Chronic Constipation by Ergot. (*Gaceta Medica de Granada*, and *El Siglo Medico*, Nov. 4, 1883.)

2029. VALENZUELA, F.—On Helenin in Diseases of the Chest. (*El Siglo Medico*, Oct. 28, 1883.)

2030. SERRET, RAMON.—On Kairin. (*El Siglo Medico*, Oct. 21, 1883.)

2031. SELLÉS, SERRANO.—Contribution to the Study of Quebracho Aspidosperma. (*Rev. Med. de Sevilla*, and *Rev. de Med. y Cirurgia Pract.*, Nov. 22, 1883.)

2032. MARAGLIANO, PROF. E.—Action of Strychnia on Dilatation of the Heart. (*Gazz. Med. Ital. Lomb.*, Nov. 17, 1883.)

2033. PUCCI.—Contribution to the Treatment of Pneumonia with the Internal Use of Carbolic Acid. (*Gazz. Med. Ital. Prov. Venete*, Oct. 13, 1883.)

2034. GALAN.—Inhalation of Oxygen in Severe Burns. (*Revista Medico-Quirurgica de Mexico*, Sept. 30, 1883.)

2035. NINA.—Hydrochlorate of Pereirina in Intermittent Fevers. (*Gazeta Medica da Bahia*, and *El Siglo Medico*, Oct. 7, 1883.)

2036. RIGGI, G.—Contribution to the Study of Cotoin. (*Gazz. Med. Ital. Lomb.*, Nov. 24, 1883.)

ART. 2009. *Vidal on the Treatment of Phagedænic Chancre by Pyrogallic Acid.*—For ordinary cases, Vidal (*Bull. de Méd. Gén.*, Nov. 1883) uses an ointment composed of pyrogallic acid 40 grammes, vaseline 120 gr., starch 40 gr. When the ulcer has a very irregular surface and undermined edges, the best plan is to use a powder (pyrogallic acid 20 grammes, starch 80 gr.), which can be blown upon the part twice daily by means of a small pair of bellows.

2010. *The Baron de Theresopolis on Sea-Sickness.* Many remedies have been recommended (*Bull. de Méd. Gén.*, Nov. 1883) against sea-sickness; alcohol, chloral, iced and effervescing drinks, and compression of the abdomen, have all their advocates. Dr. Gueneau de Mussy advises the use of belladonna plaster. The Baron de Theresopolis recommends very warmly the hypodermic injection of morphia, and reports serious cases in which a rapid

cure or great amelioration followed. A purgative must be given when there is constipation.

2011. *Guyon on the Treatment of Chronic Urethritis.*—The internal treatment is very important, and differs (*Bull. de Méd. Gén.*, Nov. 1883) according to the constitution of the patient; cod-liver oil with creasote, arsenic, iodide of iron, sulphur, and the balsams are the best remedies. The local treatment consists in injections, instillations, cauterisations, or catheterism. Injections are too often valueless, as they do not always reach the bulbous part of the urethra. For instillation, Guyon uses a tube provided with a small syringe, and by which a solution (generally nitrate of silver 1 in 20 or 1 in 50) can be brought into contact with the deep part of the urethra. Catheterism is only justified in very intractable cases, and a large metallic instrument is the best; medicated bougies were found valueless. In cases of gonorrhœal cystitis, Guyon advises the injection into the bladder of ten to fifteen drops of a solution of nitrate of silver, 1 to 2 per cent. The injection must be repeated every day, and may be used in recent as well as in old cases.

2012. *Famechon on the Treatment of Pyæmia.*—In a monograph presented to the Antwerp Medical Society, the author reports eighty-nine cases of recovery from pyæmia, and states that hygiene must play an important part in the treatment. The patient must be sent into the country, or placed in a tent if possible, and the greatest cleanliness is to be observed. Tonic alimentation is essential, and any unnecessary meddling with the wound must be avoided. Antiseptic treatment is strongly recommended as a preventive measure.

2013. *Peculiar Symptoms caused by Long-continued Inhalation of Chloroform.*—The *Jour. de Méd. et de Chir. Prat.*, 1883, reports the case of a young woman who was seized with violent headache a fortnight after her confinement; the pain yielded only to chloroform inhalations, which were continued during three days; after that time the patient became restless, tried to escape, and was beset during ten days by terrible hallucinations. A man who was suffering from neuralgia, and who had been under the influence of chloroform for about twelve days, was seized with similar symptoms, which lasted nearly two weeks.

2014. *Toporsky on Perchloride of Mercury as a Disinfectant.*—M. Toporsky has published in the *Centralbl. für Gynäk.*, Band ix., 1883, some statistics which show the good results obtained by this agent in the Breslau Lying-in Hospital. A solution of 1 in 2,000 of water is used for vaginal and intra-uterine injections, and since the perchloride has taken the place of carbolic acid, the number of cases in which complications arose during the puerperal state has been 7·5 instead of 16 per cent.

2015. *Schilling on Combination of Ergot of Rye with Salicylate of Soda or Sulphate of Quinine.*—The author states, in the *Revue Médicale* for Jan. 19, that ergot of rye prevents the noises in the ears caused by large doses of salicylate of soda and quinine. He recommends a mixture containing 1 gramme of ergotine and 10 of salicylate of soda in 250 grammes of water; the dose is one tablespoonful every two hours. The sulphate of quinine may be mixed with powdered ergot and taken on a wafer.

2016. *Dujardin-Beaumetz on the Treatment of Chronic Alcoholism by Strychnia.*—The *Bull. Génér. de Thérap.* for January 15 gives the views of the author on this subject. He thinks with Luton of Rheims that the sulphate of strychnia can be given with great benefit in all cases of delirium tremens, and other nervous symptoms produced by alcoholism. He recommends the hypodermic injection of five milligrammes of sulphate of strychnia, repeated if necessary after five hours. Luton has emitted the opinion that strychnia could prevent the bad effects of chronic alcoholism, and that a small quantity of it might advantageously be added to alcoholic drinks. Dujardin-Beaumetz, however, refutes that opinion, and says that strychnia does not prevent the visceral lesions of chronic alcoholism.

J. S. Kaeser, M.D.

2017. *King on the Treatment of Ague.*—Dr. King, in the *Lancet*, Dec. 1883, p. 1028, refers to a note in the *Lancet* of Oct. 27, on a case of ague cured by the Bath mineral waters, and asks whether the patient bathed in the cold water. Dr. King records a case of a man who had intermittent fever in Ohio for nine months. All remedies failed to cure him. A quack, travelling through the country, after taking a fee of one dollar, prescribed for the man as follows. When he felt the chill coming on he was to walk, if possible, about half a mile to a pond or stream of water, then to strip and plunge in and out almost immediately, rub himself dry, drink a glass of water, and walk briskly home. The man did as was directed, and the effect was remarkable. The man, after coming out of the water, had a good reaction, perspired very freely, and had no more ague for ten years. [The value of the cold douche in the treatment of ague has been pointed out by others. Vide *Medical Digest*, sect. 1490 : 2.]

2018. *Padley on Idiopathic Anæmia and its Successful Treatment by Arsenic.*—Mr. G. Padley, in the *Lancet*, Nov. 1883, pp. 811 and 849, contributes a valuable article on the treatment of idiopathic (progressive pernicious) anæmia. The author gives notes of a case in which the patient improved rapidly on doses of two minims of liquor arsenicalis three times a day, increased at short intervals to four minims. Statistics are given of many series of cases of anæmia, and the treatment in nearly all seems of little use, except here and there when a case was treated with arsenic or arsenicate of iron; the majority of these cases improved rapidly. A second series of statistics are given, in which arsenic was employed in the treatment with marked beneficial results. Mr. Padley draws up the following conclusions. In arsenic we have a medicine exercising what may almost be termed a specific action in 'idiopathic anæmia.' In a clearly recognised case it is useless to give iron and other tonics. Arsenic acts best in its simple and uncombined form, and its action is rather interfered with than otherwise by combination with iron. [Vide *Medical Digest*, sect. 140 : 6; *Lancet*, Jan. 1883, p. 184; and the *Practitioner*, June 1883, p. 463, and July, pp. 71, 95.—*Rep.*]

2019. *Amsden on Rattlesnake Venom in the Treatment of Tetanus.*—In the *Med. Times and Gazette*, Nov. 1883, p. 606, attention is drawn to a case of tetanus treated by the subcutaneous injection of the venom of the rattlesnake. The tetanic spasms and rigidity ceased, and were replaced by extreme prostration, followed, however, by a fairly rapid recovery. [Hydrophobia and yellow fever are both stated to be curable by the inoculation of adder's venom. Vide *Medical Digest*, sect. 508 : 4.—*Rep.*]

2020. *Nicholson on the Coagulating Power of Turpentine.*—Dr. Nicholson, in the *Med. Times and*

Gazette, Nov. 1883, p. 543, refers to an article in the *Med. Times and Gazette*, Sept. 1, 1883, in which he spoke of the use of turpentine in secondary syphilis, and in the treatment of phagedænic sores after fevers. A third use is now advocated, depending on the coagulating power of turpentine. A soldier, affected with aneurism of the popliteal artery, had been treated for nearly five weeks with a compressor over the artery at the point of Scarpa's triangle, and kept on low diet. Dr. Nicholson decided to change the treatment, and placed him on a generous diet, containing more vegetables, with a little light wine. The patient being constipated, a terebinthinate enema was ordered. Next morning the aneurism had solidified, but in a day or two a part of it became fluid again. The treatment was not continued, and Dr. Nicholson has heard no more of the case. This peculiar action of turpentine on the blood is worth bearing in mind in cases of aneurism.

2021. *Anderson on Santonine as a Remedy for Gleet.* Dr. Anderson in the *Lancet*, Nov. 1883, p. 845, states that, in treating a patient for lumbrici, he not only killed the worms, but cured a gleet which had existed for some time in spite of various remedies. The formula recommended is :—Santonine, milk-sugar, of each 5 grains : to be taken twice a day fasting, in milk.

2022. *Boulton on Colourless Iodine.*—Dr. Percy Boulton, in the *Lancet*, Nov. 1883, p. 845, refers to the discovery that carbolic acid bleaches iodine, and that the colourless carbolate combines all the advantages of both base and acid. An account of this discovery is given in the *Lancet*, July 27, 1867. The author notes that he has had great success in the treatment of a case of chronic ozæna, by employing douches of colourless carbonate of iodine. [In the *Med. Digest* several other methods of deodorising tincture of iodine are noted in sect. 250 : 2 ; and in the *Lancet*, p. 935, the use of sulphurous acid is added to the list.—*Rep.*]

2023. *Braithwaite on Infusion of Digitalis in Cardiac Dropsy.*—Dr. James Braithwaite, in the *Lancet*, Nov. 1883, p. 855, contributes a note on the diuretic action of digitalis in cardiac dropsy. Fifteen years ago the author treated a man with extreme anasarca from cardiac disease, with a weak infusion of digitalis, which the patient was ordered to take freely. This caused a very copious flow of urine, which continued until the dropsy had entirely disappeared. The treatment which the author now adopts is to order half of a small or medium-sized leaf to be infused with the addition of a little black tea, in about twelve ounces of boiling water, and taken daily. The action of the drug when thus administered is far more certain and satisfactory than that of the tincture or the powder.

2024. *Snow on Hypericum (St. John's Wort) for the Prevention and Cure of Bed-Sores.*—Dr. H. Snow, in the *Brit. Med. Jour.*, Dec. 1883, p. 1125, recommends the use of the compound oil of hypericum in the treatment of bed-sores ; it induces healthy granulations, and does not produce any smarting. A bottle should be half filled with the flowers of St. John's wort ; olive-oil is then to be added, and the bottle allowed to stand in the sunshine for a few days, till the oil becomes of a deep red colour. It is merely brushed over the sore, two or three times daily, with a feather. Richard Neale, M.D.

2025. *Ponomaroff on the Use of Cow-Koumiss in Infants.*—The koumiss used was prepared in the following manner (*Archiv für Kinderheilkunde*, Band v., Heft 1). A glass of unskimmed milk was mixed with two glasses of water, and to this mixture were added half a tablespoonful of powdered sugar, one teaspoonful of milk-sugar, and one and a half drachms of yeast previously stirred up with a little water. The whole was then poured into a champagne bottle, and securely corked. The ordinary temperature of the room sufficed; but, if the weather were very hot, a little soda was added to prevent the coagulation of the casein, and a wet cloth was kept round the bottle. Every hour or two the bottle was lightly shaken. The koumiss was ready for use at the end of forty-eight hours, and was then found to contain an average of ½ per cent. of alcohol. The dose was gradually brought up to two 'glasses' a day. The author tried it first in eight cases of advanced hereditary syphilis with emaciation, and with very favourable results ; but it failed when given as sole nourishment to healthy children, and was not properly digested by children under one month old.

2026. *Randolph and Roussel on the Presence of Cod-Liver Oil in the Fæces after Inunction.*—The fæces of fourteen healthy infants were first examined (*Philadelphia Med. Times*, Dec. 29, 1883). Only one contained a trace of oil-globules. These infants were then thoroughly rubbed with cod-liver oil twice daily for eleven days, and at the end of the third day, traces of fat were observed in the fæces of the majority. On the eleventh day, all but three specimens exhibited to the microscope a notable quantity of unabsorbed fat. The dejecta of six adults were then examined, and, after inunction in the groins and axillæ for three weeks, a well-marked increase of fat-globules was apparent. Care was taken in all the cases to make no alteration in the diet, and the skin was cleansed after each application.

Ralph W. Leftwich, M.D.

2027. *Albern on the Lemon in Paludism.*—Dr. Albern publishes (*El Siglo Medico*, Nov. 11, 1883) the details of twenty-five cases of various forms of intermittent fever, treated by decoction of lemons as recommended by Dr. Maglieri ; of these ten were cured, or 72 per cent. The cases occurred in September and October, the worst months in the year. He concludes that the treatment with decoction of lemons gives very good results, but is inferior to that with quinine. It sometimes succeeds where quinine fails, and *vice versâ* ; the action is much slower than that of quinine, four to six days being necessary to combat the attacks ; therefore it ought not to be relied on in the treatment of pernicious fevers.

2028. *Granizo on Ergot in Chronic Constipation.*—Dr. Granizo narrates (*Gaceta Medica de Granada*, and *El Siglo Medico*, Nov. 4, 1883) two cases of obstinate constipation successfully treated by ergot. The first was that of an old man who for many years had been accustomed to take strong drastic purgatives, the bowels not acting at all without their accustomed stimulus. Simple inertia of the intestinal muscles, produced by exhaustion of their contractility, the necessary consequence of the abuse of purgatives, was the diagnosis made. Two grammes (30 grains) of powdered ergot were given in three powders at intervals of two hours. This dose was followed by an abundant evacuation, which was repeated on the following day without repetition of the medicine. The ergot was afterwards repeated in smaller doses for some days, and the patient entirely recovered. The second case was similar, but not of such long standing.

2029. *Valenzuela on Helenin in Diseases of the*

Chest.—Helenin (*El Siglo Medico*, Oct. 28, 1883) is a volatile and concrete oil obtained from the root of *Inula campana*. It crystallises in four-sided prisms, insoluble in water, but soluble in ether and alcohol. Its formula is $C^{21}H^{28}O^3$, colour yellow. It melts at 72°, boils at 280°. In the General Hospital of Madrid, it has been largely tried in tuberculosis and pulmonary phthisis, chronic broncho-pneumonia, and whooping-cough. In the early stages of phthisis the results have been remarkable; in chronic bronchitis, and especially in whooping-cough, its efficacy is undoubted. Whenever helenin is administered the cough is lessened, dyspnœa and thoracic pain disappear. It gives rise to no symptoms of narcotism. The expectoration is less in quantity, and becomes gelatinous, whatever its original character might have been. On the digestion helenin exerts a marked tonic effect; the appetite improves, and this has been noticed frequently in phthisis. Dr. Valenzuela is very enthusiastic in his praise of this remedy.

2030. *Serret on Kairin.*—In doses of 1·50 grammes it gives (*El Siglo Medico*, Oct. 21, 1883) rise to no symptoms in the healthy subject; but if there be fever the temperature of the body is lowered without fail, rising again to its original height if the action of the remedy be not sustained. This fall of temperature occurs in pyrexia from all diseases. There is no accumulation; the remedy is well tolerated, and is eliminated by the urine, which it colours green. In *La Gaceta de Sanidad Militar*, Drs. Merino, Aguinaga, and Regulez y Sanz del Rio, report many cases of the successful employment of kairin, including cases of typhoid fever, pneumonia, angina, and other febrile disorders. Kairin is the most efficacious, trustworthy, and safest antipyretic, more powerful and rapid in action than even quinine, and it is the only remedy with which we can safely maintain the temperature of a patient at a convenient height throughout the course of a disease, and thus avoid one of the greatest perils, that of intense combustion.

2031. *Sellés on Quebracho Aspidosperma.*—In the *Revista Med. de Sevilla*, Senor Serrano Sellés gives the results which he has obtained with this new remedy. 1. A woman, aged 70, suffered from attacks of dyspnœa depending on cardiac lesion; all the ordinary remedies had been tried without benefit. Four grammes of the tincture of quebracho, in 150 of water, were given daily; the pulse and respiration became steady, and the dyspnœa disappeared. 2. A woman, aged 57, suffered from severe dyspnœic attacks, owing to insufficiency of the sigmoid valves. The respirations were 70 in the minute. Three grammes of the tincture were given in 130 of syrup and water; a table-spoonful to be taken every hour. At the third spoonful the respiration had descended to 62, and at the thirteenth the dyspnœa had disappeared, and did not return. 3. A woman, aged 70, had attacks of dyspnœa from old standing cardiac hypertrophy. She was greatly benefited by tincture of quebracho. 4. A woman, aged 45, who had valvular insufficiency, with frequent attacks of dyspnœa, was promptly relieved by quebracho. After one month the dyspnœa again appeared, but again disappeared quickly on the quebracho being administered. 5. A man, aged 40, addicted to alcoholic drinks, had cardiac hypertrophy with dyspnœa on slight exertion; he was much improved by quebracho.

2032. *Maragliano on the Action of Strychnia on Dilatation of the Heart.*—The author finds, on determining carefully the limits of the heart before treatment, and again after, that there is a diminution of cardiac dulness even after two days of treatment only, and marked diminution after six or seven days. If the medicine be discontinued too soon, this improvement quickly disappears, but remains if it be continued for some time. The sulphate of strychnia should be given in the dose of 2 or 3 milligrammes three times a day.

2033. *Pucci on the Treatment of Pneumonia with the Internal Use of Carbolic Acid.*—In the treatment of pneumonia, drugs can do more than modify the degree of fever. In the stage of hepatisation, to reduce the temperature, Dr. Pucci (*Gazz. Med. Ital. Prov. Venete*, Oct. 13) recommends the administration of phenate of quinine with carbolic acid. The latter he gives in this formula. ℞ Carbolic acid centig. 30–50 (grs. 4½ to 7½), alcohol q. s. water, grammes 150 (℥v.), cinnamon water, grammes 30–40 (℥j. ℥x.), syrup of orange, grammes 30 (℥j.). One tablespoonful is to be taken every two hours. The temperature falls from ½° to 2° C., convalescence is more rapid, and the mortality is diminished. He has never seen any symptoms of carbolism.

2034. *Galan on Inhalation of Oxygen in Severe Burns.*—Dr. Galan reports (*Revista Medico-Quirurgica de Mexico*, Sept. 30, 1883) the case of a woman in whom the whole of the left side of the thorax, shoulder, and arm was severely burnt. The constitutional symptoms were very severe, temperature 103° and 104° F., delirium, diarrhœa not influenced by remedies. Inhalations of oxygen were ordered. On the next day the patient was much better, the temperature had fallen nearly to normal, and the diarrhœa had ceased. The improvement continued, and the patient made a good convalescence. Seventy litres of oxygen was inhaled daily. Dr. Galan thinks that in extensive superficial burns the inhalations of oxygen do good by stimulating the pulmonary respiration, cutaneous respiration being impaired by the large destruction of the skin. In the Military Hospital Dr. Montes de Oca treated extensive burns by baths of oxygenated water with good results.

2035. *Nina on Hydrochlorate of Pereirina in Intermittent Fevers.*—Dr. Almir Nina describes in the *Gazeta Medica da Bahia* the results obtained in the clinic of Dr. Torres Homem with the hydrochlorate of pereirina in the treatment of intermittent fevers. Professor Silva, of Rio Janeiro, was the first to study the properties of *pao-pereira*. In 1838, Correia de los Santos discovered an alkaloid, pereirina. In 1879 Freire found, after careful analysis, that this so-called alkaloid was not a body of definite chemical composition, but a mixture of starchy matter; yellow colouring matter containing an alkaloid; a substance of a badly defined crystalline appearance, presenting the centesimal composition of glucose, insoluble in water; a substance having the composition of a hydrocarbon, but differing from the last; a colourless crystalline substance, with the character of a glucoside. When pereirina is treated with dilute hydrochloric acid in excess, a salt is obtained, soluble in water in all proportions. This hydrochlorate is always used by Dr. Torres Homem. Dr. Lacerda, in 1881, after a series of experiments on the physiological action of hydrochlorate of pereirina, arrived at the following conclusions. Hydrochlorate of pereirina, in toxic doses, paralyses the vaso-motor centres in the medulla oblongata and

spinal cord, as well as the cardiac filaments of the vagus nerve. It has no antithermic action; on the contrary, it often augments the central temperature by several tenths of a degree. It does not appear to influence the secretions, nor to modify directly the properties of muscular tissue, nor the excitability of the motor nerves. It exerts on the heart an action antagonistic to that of digitalis. Striking results have been obtained in the clinic of Dr. Torres Homem with pereirina and its salts in the treatment of paludic fevers, and Dr. Almir Nina promises another paper on the subject.

2036. *Riggi on Cotoin.*—Dr. Riggi (*Gazz. Med. Ital. Lomb.*, Nov. 24, 1883) thinks that Professor Albertoni overrates the value of cotoin. He has chiefly studied its action in the insane, and finds that it is not indicated in the diarrhœa which often complicates the various forms of mental alienation; it would even seem on the contrary to be contra-indicated. Cotoin is only useful in simple primary chronic intestinal catarrh. It is contra-indicated in the diarrhœa of the cachectic and marasmatic. Like all other drugs, it is powerless in the diarrhœa of phthisis. In the diarrhœa of pellagra, which is often associated with an active acute process, with fever, in relation to the specific gastro-enteritis, cotoin seems to do harm and to increase the irritation and enteritis. When cotoin does not excite vomiting, it may act on the vaso-motor nerves so as to reduce the temperature.

G. D'Arcy Adams, M.D.

PATHOLOGY.

RECENT PAPERS.

2037. Doran.—Incipient Cystic Disease of the Parovarium and Broad Ligament. (*Trans. of Path. Society*, 1883.)

2038. Talamon.—The Micrococcus of Pneumonia. (*Le Progrès Méd.*, No. 51, 1883.)

2039. Féré.—The Lesions in the Urinary Organs secondary to Procidentia Uteri. (*Le Progrès Méd.*, No. 2, 1884.)

2040. Sabourin.—Biliary Abscesses in Cirrhosis without Cholelithiasis. (*Le Progrès Méd.*, No. 2, 1884.)

2041. Capitan and Charrin.—Hypertrophy of the Spleen in Experimental Tuberculosis. (*Le Progrès Méd.*, No. 52, 1883.)

2042. Straus.—The Cause of Suppuration. (*Le Progrès Méd.*, No. 51, 1883.)

2043. Burrill.—On Staining Bacilli. (*New York Med. Record*, Dec. 15. 1883.)

2044. Newman.—Malpositions of the Kidney. (*Glasgow Med. Jour.*, Aug. 1883.)

2045. Mankovsky, V.—A Contribution to the Study of Starvation. A Histological Investigation. (*St. Petersburg Inaugural Dissertation*, 1882, p. 48.)

2046. Kiriloff.—On the Changes in the Pancreas in Septicæmia. (*Arkhiv Veterinarnykh Nauk*, June 1882.)

2047. Pohl.—Intussusception of the Bowel of many Years' Duration. (*Wiener Med. Wochensch.*, and *Centralbl. für die Med. Wiss.*, Sept. 29.)

2048. Jastrowitz.—Thrombosis of the Portal Vein from Gumma of the Liver. (*Deutsche Med. Wochensch.*, Oct. 31.)

2049. Ziehl.—Cancer of the Pancreas. (*Deutsche Med. Wochensch.*, Sept. 12.)

2050. Ruault.—The Capillary Pulse. (*Jour. de Méd. Prat.*, Oct. 1883.)

2051. Van den Corput.—The Etiology of Cancer. *Rev. de Thérap.*, Jan. 15.)

2052. Müller.—The Presence of Tubercle-Bacilli in Fungus affections of Bones and Joints. (*Centralbl. für Chir.*, No. 3, 1884.)

2053. Thomas.—Downward Displacements of the Transverse Colon. (*Boston Med. and Surg. Jour.*, No. 1, 1884.)

2054. Kermisson.—The Influence of Traumatism on the Development of Hydatid Cysts. (*Archives Gén. de Méd.*, Nov. 1883.)

2055. Mudd.—Myomatous Tumour of the Prostate in a Child Thirteen Months Old. (*St. Louis Med. and Surg. Jour.*, November 1883.)

2056. Nussbaum.—The Conversion of Malignant Tumours into Innocent Growths. (*Wien. Med. Zeit.*, June 3, 1883.)

Art. 2037. *Doran on Incipient Cystic Disease of the Parovarium and Broad Ligament.*—Mr. Alban Doran (*Trans. Path. Soc.*, 1883) says the parovarium may be easily displayed by dissecting off the posterior layer of the broad ligament under water, and then hardening for a few hours in methylated spirit before dissecting the tubes. It is composed of vertical tubes running into a horizontal tube, which can be traced into a white fibrous band running in the direction of the uterus, and which is the 'duct of Gaertner.' From these vertical tubes cysts may develop; they are lined with ciliated epithelium, and have a tendency to develop solid papillary growths from their inner walls; but while minute cysts up to the size of a pea are common enough on the tubes of the parovarium, these large cysts are relatively rare. But there are other cysts which develop in the broad ligament, away from the parovarium and the ovary; from these are developed the cysts commonly but erroneously called 'parovarian,' with thin transparent walls, single cavity lined with flat epithelium, and clear watery contents.

2038. *Talamon on the Micrococcus of Pneumonia.*—Ch. Talamon (*Le Progrès Méd.*, No. 51, 1883) has found a lanceolate micrococcus in the exudation of pneumonia, and has produced pneumonia in rabbits by injecting the liquid containing the cultivated organisms with the pulmonary substance. He could find no organisms in the blood-serum, either by the microscope or by cultivation. He is inclined to think that the organism is not specific, but is a fibrinogenic organism analogous to Pasteur's pyogenic bacterium.

2039. *Féré on the Lesions in the Urinary Organs secondary to Procidentia Uteri.*—Féré (*Le Progrès Méd.*, No. 2, 1884) gives short notes of six cases of procidentia uteri, in all of which there was evidence of cystocele and dilatation of the bladder, ureters, renal calices and pelvis, and, in five out of six, inflammation of the whole urinary tract, with purulent fluid in the kidney and abscesses in the kidney substance. In one case only there was simply hydronephrosis. He has observed several cases of uræmia in such patients relieved by reduction of the uterus. These observations prove the necessity for replacing the organ. In three cases there was endocarditis, probably due to renal lesions of infective nature.

2040. *Sabourin on Biliary Abscesses in Cirrhosis without Cholelithiasis.*—Sabourin (*Le Progrès Méd.*, No. 2, 1884) reports a case of insular cirrhosis, in which the liver was about normal size and was studded with small foci of the size of a millet-seed. Under the microscope, these were seen to be small abscesses, while others not visible to the naked eye were brought into view. They were situated either

in the fibrous tracts or among the parenchyma, but were connected with the fibrous tracts by a fibrous pedicle. The larger abscesses were surrounded by a fibrous capsule. In the walls of the smaller abscesses there were refracting blocks, apparently due to vitreous transformation of the hepatic cells, and *culs-de-sac* lined with cubic or cylindro-cubic epithelium. These were the so-called newly formed biliary canaliculi seen in many subacute and chronic inflammatory processes in the liver. Examination of the still smaller abscesses showed that these purulent foci had for their seat the bile-passages, for often in their centres could be found the high cylindrical epithelium characteristic of the bile-ducts.

2041. *Capitan and Charrin on Hypertrophy of the Spleen in Experimental Tuberculosis.*—MM. Capitan and Charrin (*Le Progrès Méd.*, No. 52, 1883) find that, on inoculating rabbits with tubercle from the human subject by injecting it into the pleural or peritoneal cavities, the animals invariably died with tuberculosis in from one month to ten weeks after inoculation. The fact to which they especially draw attention is that the spleen was always enlarged, weighing from four to ten grammes ; as the normal weight is about one gramme in these animals, the increase is remarkable. In glanders, a similar hypertrophy of the spleen has been noted, and the authors remark on the identity of the lesion in these diseases.

2042. *Straus on the Cause of Suppuration.*—Straus (*Le Progrès Méd.*, No. 51, 1883) has announced to the Société de Biologie the result of certain experiments undertaken to determine the point raised by the contradictory observations of preceding investigators, and especially lately by Ulskoff and Hermann, whether suppuration could be caused by mechanical or chemical irritants apart from micro-organisms ? Straus took the precaution to cauterise the skin of the part operated upon, so as to insure its complete disinfection. He injected sterilised turpentine or croton-oil, mixed with sweet almond-oil, by means of a slender tube of glass, of which the other end was stuffed with cotton. After the injection he cauterised the wound again. In the majority of cases no abscess resulted ; when it did, micrococci and diplococci could be found in the pus. He concludes that suppuration never occurs independently of organisms.

2043. *Burrill on Staining Bacilli.* — Dr. S. J. Burrill (*New York Med. Record*, Dec. 1883) recommends the following method of staining bacilli. Take glycerine, 20 parts ; fuchsin, 3 parts ; aniline oil, 2 parts ; carbolic acid, 2 parts ; make a solution and keep for use. When required, put about two drops into a watch-glass (a small pomatum pot is better) full of water, and gently shake or stir. Put in the smeared cover-glass, after passing it a few times through a flame, and leave it at the ordinary temperature of a comfortable room for half an hour. If quicker results be desired, boil a little water in a test-tube, add double the above quantity of staining solution, shake it gently till dissolved, then pour into a convenient dish and put in the cover-glass. Staining will be effected in about two minutes. The preparation is decolorised in the usual way, by nitric acid solution one in four, in which it is left about a minute, then dried, and mounted in Canada balsam.

2044. *Newman on Malpositions of the Kidney.*—Dr. D. Newman (*Glasgow Med. Jour.*, Aug. 1883), in his graduation thesis, gives a very detailed account of malpositions of the kidney and the surgical operations undertaken for their relief. He divides displacement of the kidney into three forms—1, Simple misplacement without mobility, in which the position of the organ is abnormal, but seldom gives rise to symptoms, and not uncommonly escapes recognition during life ; 2, Movable and floating kidney; two distinct conditions, in the former the kidney being mobile within its adipose capsule or a sac formed between the peritoneum and the muscular wall, while in the latter the kidney 'floats' in the abdominal cavity, and is attached by a mesentery to the spine. As the existence of the latter form has been denied, the author quotes two recorded cases (Henderson, *Med. Times and Gaz.*, 1854, Vol. ii., p. 501, and Priestley, *Ibid.*, March 14, 1857, p. 262). The causes of movable kidney he finds to be permanent relaxation of the abdominal attachments, absorption of renal adipose tissue, and displacements and tumours of the uterus and appendages. He relates four cases which have come under his own observation, in one of which a permanent cure was effected by nephroraphy. He considers the diagnosis easy when uncomplicated by the presence of other abdominal tumours, 'the chief errors arising from practitioners not thinking of the occasional occurrence of the disease.' For the treatment of these cases, the author recommends the use of a horsehair pad, retained in place by a broad abdominal elastic bandage, reaching from the sixth rib to Poupart's ligament, violent exercise or much walking or standing being forbidden. Where these means fail, and the patient is confined to bed, and suffers severe pain, more radical measures are justified. Nephrectomy is too fatal an operation to be performed until all other measures have failed, and life is threatened. Nephroraphy, or stitching the organ to the abdominal wall, is, on the other hand, safe and satisfactory in its results ; of eight cases already recorded none were fatal, and the results were good in all. He recommends the use of well chromicised catgut for the suture. Where excision of the kidney is contemplated, the state of the other kidney should be ascertained by catheterising the ureter, and the method of doing this by means of the electric light is fully described.

Robert Saundby, M.D.

2045. *Mankovsky on the Cerebro-Spinal Changes in Starvation.*—To study the changes occurring in the brain and spinal cord under the influence of deprivation of food, Dr. V. Mankovsky (*St. Petersburg Inaugural Dissertation*, 1882) has undertaken experiments on rabbits and dogs in Professor N. P. Ivanovsky's laboratory. One group of the animals was submitted to absolute fasting, the second group was allowed to drink ; the third was only underfed ; and in the fourth the animals, after a period of absolute fasting, received full diet for a while, and then were killed. The author thus summarises the results of his microscopical researches. 1. The tissues of the brain and spinal cord undoubtedly undergo morbid changes in cases of starvation ending in death. 2. The changes in the central nervous system are quite identical with those observed in other organs of the body ; in other words, these changes are simple atrophy and degeneration of the elements. 3. The main alterations attack the ganglionic cells ; the vessels suffer far less, the nerve-fibres and neuroglia remain intact. 4. The vascular changes consist in intumescence of the epithelioid nuclei, and proliferation of the epithelioid cells. 5. The changes occurring in fully fasting animals, or in those receiving

only water, and in the underfed, are identical. Traces of morbid changes in the brain and spinal cord may be yet found even when the animal, at first starved and then fed, appears to have fully returned to its normal condition.

2046. *Kiriloff on the Changes in the Pancreas in Septicæmia.*—Dr. Kiriloff (*Arkhiv Veterinarnykh Nauk*, June 1882) examined the pancreas in septically poisoned dogs, the animals being killed about twenty or twenty-four hours after infection. He found—1. that the granular zone of the secretory cells disappeared almost completely (though the animals did not take any food); and 2, that the capillaries in the interstitial tissue of the gland became obstructed in consequence of swelling of the epithelioid lining, the results of the obstruction being the dilatation of arteries, and stases. The pancreas, undergoing similar changes, evidently cannot duly fulfil its functions. The author thinks that in the experiments by Dr. J. J. Stolnikoff (*St. Petersburg Inaugural Dissertation*, 1880), who studied the influence of fever on the functions of the pancreas, the stoppage of the pancreatic secretion in febrile dogs depended not upon any paralysis of the secretory centres (as Stolnikoff admits), but simply upon the morbid changes in the secretory elements.

V. IDELSON, M.D.

2047. *Pohl on a Case of Intussusception of the Bowel of many Years' Duration.*—Dr. A. Pohl (*Wiener Med. Wochensch.*, 1883, and *Centralbl. für die Med. Wiss.*, Sept. 29) relates the following case. A man, aged 32, had at the age of 11, been the subject of intussusception, from which he was supposed to have recovered, only that upon any unusual bodily exertion, or indiscretion in diet, he suffered painful obstruction in the bowels. The last occurrence of this kind brought him again into the hospital, and ended fatally. The lower fourth of the ileum was found invaginated. The upper three-fourths of this intestine and the jejunum were largely dilated. The muscular fibres of the invaginated portion were hypertrophied; the mucous membrane and peritoneum were thickened, and united in folds to the intestinal walls. At the posterior walls of the intestine a perforation existed, about eight cubic centimètres in length by three in breadth. It was seated at a prominence of the intussusception. The orifice of the invaginated portion was through a firm, smooth, and thickened mass, that united the ileum with the mesentery. In several parts thick nodules of hypertrophied muscular fibres were found also in the intestine above the seat of stricture. These lesions had doubtless existed for a long period, probably from the first occurrence of symptoms, so unusual in their duration.

W. B. KESTEVEN, M.D.

2048. *Jastrowitz on Thrombosis of the Portal Vein from Gumma in the Liver.*—In the Verein für innere Medicin, on Oct. 22 (*Deutsche Med. Wochensch.*, Oct. 31), Herr Jastrowitz showed a specimen of thrombosis of the vena portæ, which had resulted in consequence of the presence of a gumma in the liver. The symptoms during life had been bleeding from the skin and kidneys, ecchymoses under the skin, icterus, and intense cutaneous itching. The portal vein was entirely stopped up, and the hepatic vessels degenerated. Infarcts were also found in the kidneys. There had been no ascites or hæmatemesis. Mercurial inunction had been begun before secondary symptoms had appeared, and Herr Jastrowitz remarks that he has before found such treatment to be followed by severe intestinal lesions.

2049. *Ziehl on Cancer of the Pancreas.*—Dr. Franz Ziehl reports, to the *Deutsche Med. Wochensch.* of Sept. 12, a case of cancer of the pancreas occurring in Professor Erb's clinic in Heidelberg. The patient was a woman, aged 34, who had always had good health, with the exception of an attack of intermittent fever, and who attended at the hospital on account of severe pain in the epigastrium, passing round to the back, which came on in paroxysms every day. She was admitted in a state of great emaciation, the skin being yellowish and dry, although there was colour in the cheeks. No tumour was perceived in the abdomen until a month after admission, when a small swelling was felt in the left epigastrium, below the margin of the liver. This tumour went on increasing until death occurred two months after admission, when it was found to depend on carcinoma of the pancreas, with secondary affection of the stomach and duodenum. The common bile-duct and the pancreatic duct were both occluded. The stools had been of a peculiar consistence for some time before death, being somewhat dry, and silvery white in colour. They were found to contain a very large number of fat crystals, whose presence pointed, even before death, to occlusion of the pancreatic duct.

ALICE KER, M.D.

2050. *Ruault on the Capillary Pulse.*—Capillary pulsations have been first noticed by Quincke in cases of slight chlorosis and of aortic regurgitation; they are best seen under the nails of the fingers, where a colour alternately pink and pale is observed, synchronous with the heart-beats. According to M. Ruault, who read a paper on this subject at the Société Clinique (*Jour. de Méd. Prat.*, Oct. 1883, p. 454), the capillary pulsations can also be seen on the red patch which appears on the forehead after rubbing it for a short time with the finger-nail. They are most visible in patients suffering from chlorosis, chronic lead-poisoning (with arterio-sclerosis), and aortic regurgitation; they disappear when the contractions of the heart are weak, irregular, or very rapid. M. Ruault thinks that they are produced by the combination of two factors—a strong systole and a general narrowing of the arteries.

2051. *Van den Corput on the Etiology of Cancer.*—M. Van den Corput has recently communicated his views on this subject to the Brussels Academy of Medicine (*Rev. de Thérap.*, Jan. 15, 1884). He states that cancer is very rare in hot countries, where the people eat little or no meat. From this fact he draws the conclusion that an excess of meat and of chloride of sodium might be the cause of the cancerous diathesis. He thinks that his opinion is supported by the fact that deficiency of nitrogen in the urine, and emaciation, are found combined in cancerous patients, which indicates a deviation of the nitrogenous food from its normal channel. M. Van den Corput recommends vegetarianism as a prophylactic measure against cancer.

J. S. KAESER, M.D.

2052. *Müller on the Presence of Tubercle-Bacilli in Fungous Affections of Bones and Joints.*—Dr. W. Müller, of Göttingen, who has examined microscopically a great number of preparations of tuberculous bones and joints, most of which had been removed by resection, states (*Centralbl. für Chir.*, No. 3, 1884) that the results of his observations agree generally with those of Schuchardt and Krause. These ob-

servers, in examining many specimens of chronic tubercular disease of bones and joints, were able constantly to make out the presence of tubercle-bacilli; and so to prove that these affections are the expression of the same infection that gives rise to tubercular affections of the lungs, kidneys, and other organs. In the majority of his preparations Müller succeeded after patient investigation in finding a few bacilli. In from eight to ten sections he found as a rule about two bacilli. He confesses, however, that in many specimens of well-marked tuberculous inflammation of joints, notwithstanding much care and perseverance, he failed to find even a single bacillus. A case is reported in support of the view of Schuchardt and Krause, that bacilli are found in greater numbers in earlier stages of articular disease. On examination of a tubercular granulation taken from the left hip-joint of a phthisical man, who had presented the first symptoms of coxitis about eight weeks before death, tubercle-bacilli were found in enormous quantities; and, even in the tissue between the individual tubercles, they were numerous and collected in thick masses. On the other hand, three instances are recorded in which bacilli were found abundantly scattered over preparations of articular disease of long standing. In each of these cases the affected joint was the knee. The disease had lasted in one case five years, in the second case eighteen months, and in the third case seven years.

2053. *Thomas on Downward Displacement of the Transverse Colon.*—Dr. Charles H. Thomas puts on record, in the *Boston Med. and Surg. Jour.*, No. 1, 1884, three cases in which he found after death deformity of the transverse colon, consisting in elongation of that portion of the large intestine and its displacement downward in the form of a loop or festoon. In the first case, the most dependent portion of the gut was found midway between the umbilicus and the pubic symphysis; in the second it was deeply impacted in the cavity of the pelvis; and in the third it reached the level of the umbilicus. From consideration of these cases, the author concludes that displacement of the transverse colon downward within the abdomen may be to any degree partial or complete; that such displacement will present itself as a solid tumour if the bowel be in a state of fæcal impaction, or as a limited area of heightened resonance if the bowel be distended with gas; but in either case the displaced part is to be found in contact with the anterior abdominal wall. The occurrence, it is asserted, of intra-abdominal tumour situated below the normal site of the transverse colon, and having the same general configuration as the colon, such tumour being of a certain consistency, and presenting evidences of being in contact with the anterior abdominal wall, or the occurrence of areas of special tympany with like outlines and similarly located, constitute diagnostic signs strongly indicative of downward displacement of the transverse colon.

2054. *Kermisson on the Influence of Traumatism on the Development of Hydatid Cysts.*—In an original memoir published in the November number of the *Archives Générales de Médecine*, Dr. Kermisson publishes a fresh case in support of the view that the evolution of hydatid disease may be influenced by traumatism. Davaine mentioned many instances, although he seems to have attached but little importance to them, in which the appearance of hydatid disease had been preceded by contusion or some slighter injury. In 1878 Dr. Boncourt recorded ten cases of hydatid cysts of limbs, in most of which traumatism, it was held, had played a considerable part as an occasional cause of the development of the disease. In the following year, Dr. Danlos published twenty-four other cases in order to prove the influence of injury on hydatid disease in general. In a thesis published by M. Martinet in 1880, a case is reported of an hydatid cyst involving the inner and lower parts of the right arm of a woman who, fourteen years previously, had received a violent blow on this region. The tumour was noticed for the first time very soon after this injury. The following case was recorded in 1881 by M. Bobrie in a work on the pathology of Iceland. A man aged 50 was kicked by a horse on the outside of the right calf. A large blood-swelling was at once produced, which gradually diminished in size during the first month after the injury, but never disappeared altogether. After an interval of twelve months the swelling increased in size, and on incision gave rise to hydatids in great number. The case reported by Dr. Kermisson is one of a man, 28 years of age, who was admitted into the Hôpital Saint-Louis with a large hydatid cyst of the liver, which had been noticed for the first time two days after a severe injury to the right hypochondriac region through the kick of a horse. An aspiratory puncture was made into the tumour, and a pint and a half of clear fluid was drawn off. Twelve days later the cyst burst into the intestine, and in this way complete cure resulted. This case, Dr. Kermisson holds, is an evident demonstration of the influence of traumatism on the evolution of hydatid cysts, especially on those of the liver. The injury, however, it is stated, could not have started the original formation of the cyst. This must have existed at the time of the injury, and the violent contusion of the abdomen had stimulated its development. The following conclusion is suggested by the author: traumatism may influence the evolution of hydatid cysts in two ways, either by originating the tumour, or by impressing on a pre-existent growth a more rapid development.

W. Johnson Smith.

2055. *Mudd on Myomatous Tumour of the Prostate in a Child Thirteen Months Old.*—At the meeting of the St. Louis Medical Society, September 29, 1883, Dr. Mudd presented this specimen (*St. Louis Med. and Surg. Jour.*, Nov. 1883). The child had been healthy until within a few weeks of its last illness. When Dr. Mudd was called to see the child, it had suffered for several days with retention of urine; the bladder was very much distended. The child had passed a little urine, from time to time, and the mother had not noticed any distension of the bladder. This retention, which came on suddenly, was persistent until death, which occurred about two weeks after he first saw the child. Upon examination of the child before death, by passing the finger into the rectum, he could feel a large tumour presenting anteriorly. The tumour was connected with the bladder, and could be outlined pretty distinctly. He could then determine that it was uniform in its outline, uniform in its consistency, and could feel, after emptying the bladder, by bimanual palpation, the outline of the tumour very distinctly. Upon making the *post mortem* examination, he found that the bladder was about as might be expected in a child of thirteen months; but there was a tumour spring-

ing apparently from the prostate gland, which was as large as a small lemon, and which presented upon the mucous surface of the bladder; it was a hypertrophy of the middle lobe of the gland, so as completely to occlude the passage of urine. From the microscopic examination, which was made by Dr. Luedeking, it appears that the character of the tumour was a hyperplastic myoma of the prostate gland. The structure of the prostate gland seemed to have been lost in the hypertrophy of the muscular tissue—the muscular tissue was non-striated, such as was found in the bladder. It was the opinion of Dr. Luedeking that the hyperplastic growth might have been developed as an intra-uterine growth. As could be seen upon examination of the specimen, the mass of the tumour would not interfere at all with micturition, the interference coming only from the projection of the third lobe. It was very distinct, and projected as little nodules, cutting off the passage of the urine. It was remarkable, from the fact that it came from so small a child, and in presenting no characteristics of malignancy; simply presenting a hypertrophy of the muscular tissue. As to the cause of death, it was found that the pelvis of the kidney was involved in the inflammatory action, probably from the obstruction to the outflow of urine; the calices of the kidney-structure also were involved. He supposed that death occurred from disturbance of the kidney and retention of urine. The appearance of the tumour was very much such as was described by Paget as a hypertrophy of the gland in old persons. No such appearance was observed in the child.

2056. *Nussbaum on the Conversion of Malignant Tumours into Innocent Growths.*—In a clinical lecture delivered in Munich (*Wien. Med. Zeit.*, June 3, 1883) Dr. Nussbaum expressed a belief that he had discovered a procedure for the positive cure of cancer, by restraining the proliferation of the tissue-elements of the disease. It appears to him that a total interruption of all peripheral sources of nutrition is the means best adapted to secure this result. He accomplishes this object by the use of the thermo-cautery, with which instrument a deep channel is made quite around the malignant growth, thus cutting off entirely the supply of blood and other nutritive fluids from the surrounding tissues. The small vessels which ascend into the tumour from the parts beneath are sufficient to preserve its vitality, so that gangrene does not occur. He thinks the thermo-cautery far preferable to the ligature, and that it possesses many advantages over the knife. Professor Nussbaum thinks that this method of circumscribing a cancerous growth, and cutting off every channel of peripheral nutrition, has a brilliant future, especially in those desperate cases in which death is imminent from hæmorrhage. In his hands, this method has afforded satisfactory results.

DISEASES OF CHILDREN.

RECENT PAPERS.

2057. HRYNTSCHAK.—A Case of Tetanus Neonatorum. (*Archiv für Kinderheilk.*, Band v., Heft 1.)

2058. LE BRETON.—Hæmatoma of the Sterno-mastoid in New-born Children. (*Paris Médical*, No. 46, 1883.)

2059. HAMILTON, A. G.—A Case of Meningocele and Imperforate Anus in the same Child. (*Australasian Med. Gazette*, September 1883.)

2060. UFFELMANN.—The Artificial Feeding of Children. (*Deutsche Med. Wochensch.*, Sept. 19.)

2061. BOHN.—Eczema in Children. (*Wiener Med. Blätter*, Sept. 20.)

2062. WERTHEIMBER.—Gastric Ulcer in a Child. (*Jahr. für Kinderheilk.*, and *Deutsche Med. Wochensch.*, Oct. 3.)

2063. BROWNE.—Scarlatinal Nephritis in the Eighth Week of Convalescence. (*Brit. Med. Jour.*, Nov. 1883, p. 875.)

2064. LANNOIS.—Tuberculosis of the Testicle in Young Children. (*Jour. de Méd. et de Chir. Prat.*, 1883.)

2065. AUVARD.—Tarnier's Incubator for Children. (*L'Union Médicale*, Dec. 15, 1883.)

2066. JACOBI.—Diphtheria in a New-born Child. (*New York Med. Jour.*)

ART. 2057. *Hryntschak on a Case of Tetanus Neonatorum.*—The following case is recorded in the *Archiv für Kinderheilkunde*, Band v., Heft 1. The birth of the child, a boy, was a little difficult, but presented nothing unusual. On the fourth day, a short-sighted nurse tore off the remains of the umbilical cord, and stopped the bleeding which ensued with a rag soaked in brandy. Later, lead ointment was applied. On the tenth day the child ceased to take the breast, and its whole body became stiff with ever-recurring convulsions. The father was said to have once had a tetaniform fit, and two out of the three other children died of convulsions. On the twentieth day the child, whose condition had remained unaltered, was brought to the hospital; its whole body was then stiff, so that the child could be held straight out by one foot. The head, with its fontanelles, was normal; the arms were half flexed and pronated, and crossed over the breast. The shoulder-joints alone showed any mobility. The navel was the seat of a sanguineo-purulent discharge, and the skin around was red and swollen. At this stage of the examination the child had a fit—one of those which, according to the mother, had recurred every five or ten minutes for the previous forty-eight hours. It began with a short bleating noise; then the head was retracted to the utmost, the trunk curved backwards in incomplete opisthotonos, the forehead wrinkled, the eyes closed, the teeth clenched, the mouth projected like a muzzle, and the face dark blue. The pulse could not be felt. The temperature in the rectum was 101°·2. Lead lotion was ordered for the wound, and chloral-hydrate internally, one-tenth of a grain every hour. In the evening the condition of the child was unaltered, except that the temperature was 99°. The respirations in the interval were 50. Six doses in succession were then given, and two hours' quiet sleep followed. The next day, Aug. 30, the joints were a little more mobile. On Sept. 1 the temperature had fallen to 96°·8 and the fits were stronger, but the navel looked healthier. The dose of chloral was increased, so that 15 grains were to be taken in the course of each day. On Sept. 2 the temperature was 95°·6. The child began to move its feet, and often slept for hours together. During the next week the child had about seven fits a day, and the temperature was about 97°. On the 9th, the feet became œdematous. On Sept. 13 there were two fits a day; temperature, 96°·3. The extremities could be flexed and extended. The trismus disappeared. Chloral reduced to 7½ grains daily. On Sept. 14 there was a return of fits and trismus; 15 grains of bromide of potassium were given. On Sept. 15 a large number of fits occurred with marked cyanosis;

œdema was increasing; the extremities were stiff; 7½ grains of chloral were given daily. On Sept. 19 no fit for twenty-four hours; temperature, 96°·1. On Sept. 25 there were no more fits, but the muscles were still rigid; there was no trismus. The chloral was discontinued on account of diarrhœa. Temperature, 99°. Oct. 2 no rigidity. Digestion good. The child was frequently seen afterwards, but no trace of the complaint remained. The temperature, which was always taken in the rectum, was checked by using two thermometers.

2058. *Le Breton on Hæmatoma of the Sterno-mastoid in Newborn Children.*—The two cases here recorded (*Paris Médical*, No. 46) do not present any very special features. The tumours were observed respectively on the eighth and eleventh days, and were then of the size of a nut; they subsequently became as large as a chestnut, and appeared incorporated with the muscle, becoming hard when this contracted and following its oblique direction. One was painless, but the other appeared slightly tender. Both the children were delivered by the breech, and in one considerable traction was required before the head would pass.

Ralph W. Leftwich, M.D.

2059. *Hamilton on a Case of Meningocele and Imperforate Anus in the same Child.*—In the *Australasian Medical Gazette* for Sept. 1883, Dr. A. G. Hamilton publishes a case of meningocele and imperforate anus occurring in a child, which is remarkable firstly as regards the concomitancy of these two malformations in the same child, and secondly, on account of the extraordinary vitality possessed by the patient in recovering from the operations undertaken for their relief. On September 3, 1882, Dr. Hamilton was sent for to see a new-born male child, with a meningocele at the pronal part of the occipital bone just behind the foramen magnum. Three days later the nurse told him that, although three doses of castor-oil had been administered, nothing had passed, and that she had failed to find a passage. Seven days after the child's birth, Dr. Hamilton found it very low, and in great pain, vomiting every time it took the breast; the ejected matter being tinged with meconium; the abdomen was very tympanitic. On examination, the anus was found imperforate, but no bulging of the gut could be felt. Dr. Hamilton made an incision in the middle line; no meconium appeared. On introducing his finger, it was arrested about two inches from the orifice by a membranous septum, occluding the rectum. When the child cried, a sense of bulging downwards was felt; from which he inferred that the bowel was continuous above. He made several notches in the membrane, and stitched the mucous membrane to the skin. On removing his finger, the contents of the bowel escaped freely, and after a short time the child appeared much more comfortable. The nurse was instructed to pass up her finger every day, and to use bougies. Up to the time of the report no contraction had taken place, and there was perfect control over the fæces. [Dr. Hamilton omits to say whether he found any depression at the situation of the anus. We strongly suspect that there was such a depression. Three days elapsed before the nurse detected the malformation, strong evidence in favour of the presence of a perforate anus, otherwise the discovery would have been sooner made. Secondly, Dr. Hamilton states that no bulging of the gut could be felt; if the case had been one of imperforate anus, such bulging would have been undoubtedly felt. Thirdly, he found the gut two inches from the orifice, and yet was able to attach the mucous membrane to the skin, which he would not have been able to do had the anus not led into a depression lined with skin. The case, from Dr. Hamilton's own showing, is to our mind distinctly one, not of imperforate anus, but of imperforate rectum.—*Rep.*] A month later, the child was brought again with a view to having its meningocele treated. After a preliminary tapping and the removal of 3 ounces of fluid, Dr. Hamilton determined to remove the tumour with whipcord. The ligature was removed the day after its application, and no bad symptoms occurred. Three months later, the child was well and thriving. Waldemar J. Roeckel.

2060. *Uffelmann on the Artificial Feeding of Children.*—Dr. Uffelmann communicates to the *Deutsche Med. Wochensch.* of Sept. 19 a report on the artificial nourishment of children in the Hospice des Enfants Assistés in Paris. A separate department, called the "Nourricerie," has been instituted for this purpose, containing two wards separated by a corridor, with four beds for nurses and eight cots for infants in each. At the end of the corridor is a stall, where five asses with their foals are kept, the presence of the foals being considered desirable to stimulate the secretion of the milk. When an infant is to be fed he is carried by his nurse into the stall, where she sits on a low stool by the side of the ass, and holds the child under the animal in such a way that he can suck conveniently. The babies take to the nourishment apparently with as much relish as from their mothers, and the asses soon get used to their presence. One ass suffices for three children, and only after their wants have been appeased are the foals allowed to suck, extra nourishment being also given to them. The children thus fed have been hitherto exclusively those of a syphilitic tendency, nearly all of whom died in the Foundling Hospital when fed by the bottle. Since the adoption of the above-mentioned treatment, 70 per cent. have lived. Goats were at first employed instead of asses, but they were found to be much less suitable for the purpose, 82·6 per cent. of the children dying whilst taking their milk. The children are placed under very favourable conditions in other respects also, each nurse having only two children to look after, and always the same two, so that she becomes attached to them, and tends them better than if she were always changing them. The only drawback to the institution is its small size, as each child must be dismissed in about three weeks to make room for another; but it is hoped that funds for enlarging it may soon be procured.

2061. *Bohn on Eczema in Children.*—Professor Bohn of Königsberg writes to the *Wiener Med. Blätter* of Sept. 20, on the subject of eczema in children. He finds it to be so often associated with a too fat condition of the body, that he considers it may be cured by removing the causes of the fatness. These are chiefly errors in diet, and, in the case of sucklings, may be remedied by a change of nurse. Torpidity of the bowels is often associated with it. Oil and cleanliness will often succeed in curing the eczema after the diet has been attended to, or recourse may be had to some of the usual applications. The most common seat of the eczema, viz., the head, is considered by the author to be due to the increased flow of blood to the skull and brain during the first year of life.

2062. *Wertheimber on Gastric Ulcer in a Child.*—The *Deutsche Med. Wochensch.* of Oct. 3 quotes from the *Jahrbuch für Kinderheilkunde* a case of simple gastric ulcer in a girl aged 10, reported by Dr. Wertheimber, of Munich. The child was anæmic and delicate, and had suffered for some weeks from loss of appetite and distension of the stomach, when she suddenly felt a pain in the gastric region whilst doing gymnastic exercises, which passed off after a short time. Some hours later the pain returned, accompanied by nausea, and was followed by the vomiting of a teaspoonful of fluid blood, blood being also mixed with the stools passed on the same day. For a week these attacks of hæmatemesis came on daily, always accompanied and preceded by pain and nausea, and the diagnosis of gastric ulcer having been made, it was cured in five weeks by suitable diet. The age of the patient is the most interesting feature of the case, very few observers having recorded any cases between 1 and 10 years of age. Alice Ker, M.D.

2063. *Browne on a Case of Scarlatinal Nephritis occurring in the Eighth Week of Convalescence.*—Mr. O. Browne, in the *Brit. Med. Jour.*, Nov. 1883, p. 875, reports a case, under the care of Dr. Gee, of a child, aged 7, admitted on Sept. 25, 1882. The fever ran a mild course, and the patient left the hospital in six weeks, apparently quite well. There had never been any trace of albumen in the urine during the patient's stay in the hospital. Nine days after leaving, the child's eyelids were noticed to look puffy, and three days subsequently the urine contained much albumen. After four days, a papular rash, much like measles, appeared over the face and back. There were no catarrhal symptoms, and the temperature was not raised. The rash faded in two or three days, and in about a month's time all the albumen had disappeared.

Richard Neale, M.D.

2064. *Lannois on Tuberculosis of the Testicle in Young Children.*—This affection has been described by Giraldès, de St. Germain, and others, and does not seem to be very uncommon. M. Lannois (*Jour. de Méd. et de Chir. Prat.*, 1883) has seen it occur in young children born of consumptive parents, and states that its clinical characters are the same as in the adult. The epididymis is the part chiefly affected, and becomes enlarged, hard, and knotty. One or more fistulæ may form, and the cord is swollen and hard.

2065. *Auvard on Tarnier's Incubator for Children.* This apparatus, which has been in use at the Paris Maternité for about two years, is described by M. Auvard in the *Union Médicale* for Dec. 15, 1883. It consists of a wooden box provided with a glass cover, and divided into two parts, one above the other. Four or five bottles filled with boiling water are placed in the lower compartment, while the upper is occupied by the child; there is an opening of communication between the two, and an arrangement for ventilation. The air is kept moist by a sponge dipped in water and placed in the upper compartment, where a temperature of 30° to 32° C. is maintained. The child is dressed in its ordinary clothes, and can be taken out of the box without danger for feeding. Very good results have been obtained by this method in cases of premature birth, the mortality being 38 per cent. against 66 per cent. in another hospital where no incubator is used. Out of twenty-five children suffering from sclerema, twenty-one were cured—a striking contrast with M. Depaul's calculation, according to which 80 per cent. of the cases end fatally within a few days. The incubator acts in the same way as Professor Winckel's permanent bath, and is probably more practical. J. S. Kaeser, M.D.

2066. *Jacobi on Diphtheria in a New-born Child.* A case of diphtheria in a new-born child was reported by Dr. Jacobi at a meeting of the New York Obstetrical Society (*New York Med. Jour.*). The child's mouth was washed out by a midwife with a linen cloth, which had been washed and ironed a few days before. During the night it cried a great deal, and did not swallow. The next day its mouth was found to be of a dark-red colour, and the edges of the tongue almost black. This could be washed off. Two white spots were seen at a point corresponding with the upper lateral incisors, and were taken by the family for congenital teeth. Almost all of the food taken into the mouth during the first day of the child's life returned through the nose. The third day the mouth, lips, tongue, and cheek were covered with a thick greyish-white membrane, which could be partly wiped off. There was hoarseness, but no laryngeal stenosis, and the eyes and nose were not affected. Death took place the next day. Microscopic examination showed the membrane to be diphtheritic.

SYPHILOGRAPHY.

RECENT PAPERS.

2067. Mracek.—On Enteritis in Inherited Syphilis. (*Viertelj. für Derm. und Syph.*, Heft 2, 1883.)

2068. Proksch.—The Transmissibility of Venereal Diseases to some Warm-blooded Animals. (*Ibid.*)

2069. Arning.—On the Presence of Gonococci in Inflammation of Bartholine's Glands. (*Ibid.*)

2070. Defontaine.—On Articular Syphilis. (*Thèse de Paris*, 1883.)

2071. Morel.—Gonorrhœa and Affections of the Heart. (*Revue de Thérapeutique*, No. 20, 1883.)

2072. Davies-Colley.—On Acute Gonorrhœal Rheumatism. (*Guy's Hosp. Reports*, 1883, p. 187.)

2073. Meighan.—Two Cases of Hard Chancre of the Eyelid. (*Glasgow Med. Jour.*, Sept. 1883.)

2074. Hamilton.—On the Condition of the Urethra and Neighbouring Parts in Acute Gonorrhœa. (*Practitioner*, Sept. 1883.)

2075. Hamonic.—On some Clinical Forms of Localised Gonorrhœa in Women. (*Annales de Derm. et de Syph.*, Nos. 7 and 8, 1883.)

2076. Bottey.—On Pyrogallic Acid in the Treatment of Chancres and Chancrous Buboes. (*Ibid.*)

2077. Fournier.—Syphilitic Teeth. (*Ibid.*, Nos. 9 and 10, 1883.)

2078. Brocq.—On the Treatment of Phagedænic Chancres by Pyrogallic Acid. (*Ibid.*, No. 10.)

2079. Raphael.—Gonorrhœa with Ulceration of the Neck of the Bladder of Four Months' Duration Cured by Blisters to the Perinæum. (*New York Med. Jour.*, Oct. 20, 1883.)

2080. Gouguenheim.—The Comparative Value of Iodine and Mercury in Syphilis, especially during the Secondary Period. (*Bull. et Mém. de la Société de Thérapeutique*, Nos. 12–14, 1883.)

2081. Terrillon.—Gummata and Cold Abscesses; Differential Diagnosis. (*Progrès Médical*, No. 48, 1883.)

2082. Holmes, Gordon.—Syphilis of the Larynx Reviewed in Connection with Recent Clinical and Pathological Investigations. (*Med. Press and Circular*, Oct. 31, Nov. 7 and 14, 1883.)

2083. Brandis.—The Treatment of Syphilis as carried out at Aix-la-Chapelle. Translated by H. Auchinleck. (*Med. Press and Circular*, Nov. 21 and 28, 1883.)

2084. Parinaud.—Interstitial Keratitis and Hereditary Syphilis. (*Arch. Gén. de Méd.*, Nov. 1883.)

2085. Rohmer.—Syphilitic Sarcocele. Thèse d'Agrégation. (*Revue Méd. de l'Est*, Nov. 15, 1883.)

2086. Greves.—Syphilitic Disease of the Bones. (*Lancet*, Nov. 17, 1883.)

2087. Davidson.—Syphilitic Disease of the Lung. (*Ibid.*)

2088. Davidson.—Syphilitic Disease of the Trachea and Bronchi. (*Ibid.*)

2089. Dunn.—Gummatous Tumours of Muscles. (*Ibid.*, Nov. 24, 1883.)

2090. Venereal Diseases in the Army. Army Medical Department Report for 1881. (*Brit. Med. Jour.*, Nov. 24, 1883.)

2091. Boulton.—A Case of Syphilitic Disease of the Vulva with Gummy Hyperplasia of Clitoris. (*Ibid.*)

2092. Macdonnell.—Historical Notes on Syphilis. (*Philadelphia Medical News*, Nov. 24, 1883.)

2093. Guyon.—The Treatment of Chronic Urethritis and Gonorrhœal Cystitis. (*Bull. Gén. de Thérap.*, Nov. 30, 1883.)

2094. Sangster.—On Secondary Syphilitic Eruptions, with Points in Diagnosis. (*Lancet*, Dec. 1, 1883.)

2095. Althaus.—Athetosis after Syphilis. (*Lancet*, Dec. 8, 1883.)

2096. Kelsey.—Syphilitic Disease of the Rectum. (*New York Med. Jour.*, Dec. 8, 1883.)

2097. Phillips.—A Case of Diabetes Insipidus due to Syphilis. (*Lancet*, Dec. 15, 1883.)

2098. Grandin.—A Case exemplifying one of the late Lesions of Syphilis. (*Boston Med. and Surg. Jour.*, Dec. 20, 1883.)

2099. Wood, H. C.—Syphilis of the Brain and Membranes. Lecture I. (*Ibid.*)

2100. Zakharevitch, V. M.—On the Excision of the Syphilitic and Soft Chancres. (*Vratch*, 1882, No. 33, pp. 546–48.)

2101. Rosenberg.—A Syphilitic Family. (*Centralbl. für die Med. Wiss.*, June 23.)

2102. Defontaine.—Syphilitic Affections of the Joints (*Jour. de Méd. Prat.*, p. 461, October 1883.)

Art. 2067. *Mracek on Enteritis in Inherited Syphilis.*—This paper is based on observations made by Mracek at the Pathological Institute of Prof. Kundrat in Vienna (*Viertelj. für Derm. und Syph.*, Heft 2, 1883). Syphilitic affections of both ends of the alimentary canal have long been recognised, but their occurrence in the small intestine has been doubted. In acquired syphilis in adults, such lesions are excessively rare. In children with the inherited form of disease they are more common, but not so frequent as Birch-Hirschfeld's observations (five cases of intestinal lesion in forty of syphilis) would seem to show. In a series of about two hundred examinations, made up of children who themselves bore marks of syphilis, and of stillborn children of syphilitic mothers, Mracek found ten cases of syphilitic disease of the intestines. In the present paper six of these cases are related in detail, and some others of a similar nature are referred to. From these cases it appears that syphilitic disease of the intestine occurs in two forms; (1) as a diffused inflammatory process extending over the whole or large areas of the gut, or (2) as circumscribed nodules limited to certain portions of the intestine. In the first form, the infiltrated patches, in the earliest stage, are only distinguished from the normal tissue by their rigidity and pale yellow colour. In a more advanced stage, the infiltrations which occupy Peyer's patches have a pitted or dimpled appearance, and stand out clearly from the surrounding parts. The circumscribed nodules are almost always limited to the small intestine. Rarely is the stomach or large intestine affected. They are most frequently found in the upper part of the jejunum; not in the lower part of the ileum, which is often the seat of other morbid changes. The nodules are scattered irregularly over the gut, and vary from the size of a millet-seed to that of a lentil. They are situated chiefly in the deeper part of the submucous tissue, or between the muscular layers, or in the circular fibres. From the outside they appear as yellowish spots; from within they are distinguished by the reddened mucous membrane which covers them. Over the largest nodules the mucous membrane is mostly rigid and smooth, but never dimpled or pitted as in the infiltrated form of growth. The nodules grow towards the serous surface, which in the end becomes congested and thickened. Sometimes also the intestines become adherent to each other or to the abdominal walls. The nodules also tend to degenerate and break down. Both forms consist essentially in a small-celled growth of the intestine wall, but the infiltrated variety attacks especially the gland structures, particularly Peyer's patches. The nodules are scattered irregularly in roundish groups. The change begins as an infiltration of the adventitia of the smaller arteries; in the infiltrated form it originates in the vessels which surround the patch; in the nodular form it begins in the central vessels. The arteries become thickened, narrowed, and finally blocked, the result of which is degeneration of the new growth. The capillaries usually remain unaffected or are only simply widened. At a later period the veins undergo a change similar to that of the arteries, but in a less degree. The lymphatics, especially those between the muscular layers and beneath the serous coat, also participate in the change to a slight extent. In two cases, both eight months fœtuses, perforation of the gut had occurred, with consequent purulent peritonitis. These cases show that the change may occur rapidly *in utero*. Intestinal lesions have not yet been found before the seventh month of intra-uterine life. Besides the changes in the intestine, the meconium was also found to be thick and tenacious in several cases. In one case, no meconium was discharged for over fifteen hours. The syphilitic growth may also lead to irregular narrowing of the lumen of the intestine by the inward projection of the nodules; but the author has never seen the ring-like strictures described by Oser. The mesenteric glands were always enlarged and infiltrated. In no case was the intestine alone affected by syphilis. There were constantly disease of the liver and spleen, and osteochondritis. Often also, in the most severe instances, there were changes in other organs—*e.g.* the lungs, brain, or kidneys, as well as different kinds of disease of the bones. To the paper is appended a series of drawings showing the most marked histological changes found in the cases which were examined by the author, and also a list of authors who have written on the subject of syphilis of the intestines.

2074. *Hamilton on the Condition of the Urethra and Neighbouring Parts in Gonorrhœa.*—Professor Hamilton, of Aberdeen, describes (*Practitioner*,

September 1883) the histological changes met with in the organs of a man who was suffering from acute gonorrhœa at the time of his death from an injury to the chest. The duration of the gonorrhœa was unknown. The penis, testes, and epididymes were placed in Müller's fluid for several weeks, then in methylated spirit, and sections were made with the freezing microtome. The epithelium of the urethra, in the normal state, is disposed in three strata, the deepest layer being composed of flat endothelium-like cells, the middle layer of pear-shaped cells, and the most superficial layer of completely formed columnar cells. In acute gonorrhœa, the normal process is exaggerated. The deep layer of epithelium being unduly stimulated, apparently by the action of the irritant applied, its cells divide too quickly. Thus time is not afforded for the complete elaboration of the columnar cells, but an embryonic progeny is thrown off into the urethral canal. The morbid changes are almost confined to the epithelial surface. In some parts of the specimen there was only one layer of epithelium—the deepest. In other parts a confused mass of rounded and pear-shaped embryonic bodies lay above this layer. The greatest number of cells were thrown off in an embryonic rounded condition, as pus-cells ; but a few of them had become elongated. The secretion of the mucous glands of the urethra is also much increased in gonorrhœa. As is the case in bronchitis, the cellular part of the gonorrhœal discharge is derived from the epithelium, and the fluid part from increased secretion of the mucous glands. The mucous membrane in gonorrhœa contains a quantity of cellular effusion. The cells are mainly limited to this particular locality, but long rows of similar cells extend thence into the substance of the corpus spongiosum, along channels lined by epithelioid tissue, and evidently representing the lymphatics. Many of these inflammatory cells seem to be leucocytes. Others can be seen springing from the connective fibrous tissue of the mucous membrane. The blood-vessels were not markedly congested nor much dilated ; the only abnormality being groups of three or four leucocytes entangled within them. The trabecular tissue of the corpus spongiosum and corpora cavernosa was normal, but within the cavernous spaces were large accumulations of leucocytes into masses usually adherent to the wall of a space. Some spaces also contained red corpuscles in certain places, whilst in others they were distended with blood. The tubes of the testes showed distinct evidence of catarrhal inflammation, but there was no hyperplasia of the fibrous tissue, nor any abnormal effusion of inflammatory cells into it. The membrana propria seemed normal. The epididymes also showed catarrhal appearances, but further advanced than in the tubes of the testes.

2077. *Fournier on Teeth in Inherited Syphilis.*—In a very long paper published in the *Annales de Derm. et de Syph.*, Nos. 9 and 10, 1883, M. Fournier discusses in great detail the various changes in the teeth that may be found in subjects of inherited syphilis. The influence of the disease may be shown in two ways : 1. by delay in the evolution of the teeth ; 2. by arrest of development and modification in structure—the origin of the consecutive malformations of the teeth. The first of these is of but slight value in diagnosis, and does not require any detailed description. It is the second class of changes to which M. Fournier devotes much attention, and which he divides into four principal groups, viz.: 1. Erosions of the teeth ; 2. Microdontism, or abnormal smallness of certain teeth ; 3. Dental amorphism, characterised by the fact that certain teeth lose, more or less, the proper attributes of the type to which they belong ; 4. Vulnerability of the dental system, shown by rapid wearing, alteration, and early decay of certain teeth. To these four principal groups may be added some rarer peculiarities, *e.g.* irregularities of implantation, and anomalies in the position of the teeth in regard to one another. M. Fournier next puts forward the following propositions. 1. The influence of inherited syphilis may be shown on both sets of teeth. 2. The milk teeth are—or, at least, appear to be—much less frequently influenced by syphilitic heredity than the permanent teeth. 3. Malformations of the teeth, due to syphilitic heredity, are generally multiple and symmetrical (in the affected jaw). Erosions of the teeth are divided into two groups. *Group I. Erosions of the crown of the tooth.* These are subdivided into (*a*) cup-shaped erosions (*en cupule*) ; (*b*) Facet-shaped erosions (*en facettes*) ; (*c*) Furrows (*en sillon*) ; (*d*) *Erosion en nappe*, which is simply an exaggeration of the preceding forms, *i.e.* in which they cover a large surface of the crown (honey-comb tooth). *Group II. Erosions of the cutting edge of the tooth.* These vary according to the kind affected. Thus, in the first molar (the only one which shows the influence of syphilis) there is true atrophy of the summit of the tooth (*atrophie cuspidienne* of Parrot). The canines may show two kinds of erosion, and the incisors at least five kinds. It is to the last of these five kinds, called here 'Hutchinson's tooth,' that the greatest importance attaches. Its chief characteristic is a semilunar notch in the free border. (A long account of this form of tooth, according to Mr. Jonathan Hutchinson's description of it, is then given.) Erosions may affect the temporary or permanent teeth, but much most frequently the latter. M. Fournier's opinion on the subject of erosions in connection with inherited syphilis is as follows. 1. The dotted, cup-shaped, and facet-shaped erosions, as well as a serrated condition of the cutting-edge, have little or no value from a diagnostic point of view. 2. Erosion in the form of furrows (*erosion sulciforme* of Parrot), though of more value than the others, is not infrequently found without any syphilitic taint. 3. Atrophy of the crown of the tooth, especially of the first molar, has more significance. 4. The best sign, and, indeed, an almost certain one, of inherited syphilis, is the semilunar notch of the free border (Hutchinson's tooth) ; and when this affects the median upper incisors it is a particularly valuable, but still *not pathognomonic*, sign of the taint. The other changes, viz., microdontism, amorphism, vulnerability of the dental system, &c., are next considered ; but, like the erosions, none of them are pathognomonic of syphilis. Syphilis is not only capable of originating changes in the teeth, but clinical observation shows that it is one of the most active causes. The conclusion arrived at by M. Fournier is that, though the dental malformations in question should always lead to a suspicion of inherited syphilis, they are none of them in themselves conclusive evidence of it.

2080. *Gouguenheim on the Comparative Value of Iodine and Mercury in Syphilis, especially during the secondary stage.*—This paper is based on the results of treatment of syphilitic women in Lourcine

Hospital (*Bull. et Mém. de la Soc. de Thérap.*, Nos. 12, 13, 14. 1883). For each of these drugs there are indications and contra-indications which depend not alone on the stage of the disease, but also on the idiosyncrasy of the patient, and especially on the nature and seat of the lesions. Syphilitic affections of the skin disappear more quickly under mercury than iodides. In buccal and pharyngeal syphilides, especially if confluent and hypertrophic, iodine is decidedly superior to mercury; but local treatment is also very important. In diffused and hypertrophic lesions of the larynx, especially if there be also œdema, the iodides are remarkably successful, while mercury is useless—even dangerous. For insomnia, headache, pains in the bones, muscles, and joints, the two drugs are about equally effective. Iodide does not often disagree. It should be given at meals in a glass of red wine or in broth. In chronic affections of the stomach both mercury and iodine are contra-indicated in the ordinary mode of administration. In such cases subcutaneous injection is very valuable. Patients with a very sensitive skin sometimes cannot bear the iodides, but scrofulous persons with discharging syphilides do badly under mercury and well under iodine. In syphilitic cachexia the two drugs are of about equal value; but tonics should be given as well. It is incorrect to say that mercury is a specific only in the earlier stages and iodine only in the later stages of syphilis.

2084. *Parinaud on Interstitial Keratitis in Hereditary Syphilis.* — M. Parinaud remarks (*Archiv Gén. de Méd.*, Nov. 1883) that in childhood and youth interstitial keratitis is perhaps the most certain mark of inherited syphilis, though it may be due to other causes. There are also two kinds of teeth, which, like keratitis, are particularly characteristic; and when both affections are present together, the probability of syphilis becomes so much the greater. The first kind of tooth is that known as Hutchinson's, characterised by the semilunar notch (in the median upper incisors), the small size, striation, cup-shaped erosions, and yellowish colour. The second form of change is seen in the molars, especially the anterior ones. It is characterised by absence, or incomplete development of the enamel of the grinding surface, and inequalities and furrows near the free border. If a history of miscarriages in the mother, and of great mortality of her children during the early months of life, be added to the affections of the eyes and teeth in the patient, syphilis is almost certain. M. Parinaud has accordingly investigated among his dispensary patients 32 cases of interstitial keratitis occurring in persons under 20 years of age, with special reference to the three points above mentioned. In 23 of these syphilis of the parents was established by their own avowal, or by the existence of the three points. In the remaining nine, syphilis was very probable, since two of the three points could be established. The 32 mothers had 160 pregnancies; and 75 of the 160 children were living at the time those with keratitis came under observation. One of these patients was the sole survivor of twelve pregnancies, one of ten, two of eight, and one of five pregnancies. Further inquiry into the 32 cases led to the conclusion that the miscarriages and the deaths of the children in early life had occurred most frequently before the birth of the subject of keratitis; whilst in the pregnancies which followed, the result was generally more favourable. Hence M. Parinaud is of opinion that keratitis in children is the manifestation of attenuated syphilis in their parents. Twenty-seven of the thirty-two patients were between the ages of 7 and 18 years. One case was that of an infant 10 days old, in whom both corneæ presented a ground glass appearance without vascularisation. M. Parinaud has seen interstitial keratitis pretty frequently after twenty years of age, but in such cases it is difficult to gain proof of syphilis in the parents. He also thinks there is no doubt that some cases of keratitis in adults are due to acquired syphilis, and others to rheumatism. Only ten of the thirty-two patients were boys. The large proportion of cases in girls of keratitis is well known. The most characteristic changes in the teeth (upper incisors and molars of the permanent set) were present in nineteen. In four others the permanent teeth had not appeared. The author has never seen a case of interstitial keratitis clearly due to scrofula. Interstitial keratitis is favourably influenced by mercury, and especially by iodide of potassium, whatever may be its cause.

2093. *Guyon on the Treatment of Chronic Urethritis and Gonorrhœal Cystitis.*—M. Guyon, in a lecture on chronic urethritis (*Bull. Gén. de Thérap.*, Nov. 30, 1883) insists strongly on the importance of *general* treatment, according to the diathesis which originated and is keeping up the discharge. Local treatment is also of great value; but injections used in the ordinary way rarely reach the spot where they are most wanted. M. Guyon, therefore, recommends the application of remedies directly to the diseased part by means of his bulb-ended catheter with a very fine opening at the apex of the bulb, and a graduated glass syringe attached to the catheter. The bulb is introduced until resistance is felt; it is then withdrawn a little, and five or six drops of a solution of nitrate of silver, varying in strength from 10 to 25 grains to the ounce, or of sulphate of copper, from about 15 to 50 grains to the ounce, are injected. After waiting a few minutes the instrument is to be pushed onwards towards the posterior extremity of the urethra, where from twenty to twenty-five drops are injected. The passage of instruments for the cure of chronic discharges should only be resorted to in obstinate cases. Metallic sounds give good results. Medicated bougies appear to M. Guyon to be useless. *In gonorrhœal cystitis* the daily instillation of from ten to fifteen drops of a solution of nitrate of silver (five to ten grains to the ounce) arrests bleeding, and gives very rapid relief. This treatment is applicable both to recent and chronic cases. The persistence and tendency to relapse which sometimes characterise the chronic or subacute form of cystitis may give rise to a suspicion of vesical tuberculosis, from which the diagnosis may be very difficult.

2097. *Phillips on Diabetes Insipidus due to Syphilis.*—The notes of this case were read by Dr. Sidney Phillips before the Harveian Society (*Lancet*, Dec. 15, 1883). A man, aged 33, for three weeks before he came to St. Mary's Hospital on Sept. 28, 1883, had been passing a large quantity of urine. During the night before he came under observation he had passed ten quarts. The urine was faintly acid, colourless, specific gravity 1001, free from albumen or sugar and from phosphatic or other deposit. There was severe pain, worse at night, in the right fronto-parietal region, with localised tenderness. The right pupil was irregular from old iritic adhesions, and in the substance of the tongue there was a gumma as big as a marble.

Ten years previously he had attended the hospital with a chancre and secondary eruption. In a week, after taking ten grain doses of iodide of potassium thrice daily, the patient reported that the headache had ceased, and that he passed less water. Improvement continued, and on Nov. 1 he was passing only a little over three pints of urine in the twenty-four hours. The gumma of the tongue had much diminished in size. ARTHUR COOPER.

2100. *Zakharevitch on the Excision of Syphilitic and Soft Chancres.*—In the *Vratch*, 1882, No. 33, p. 546, Dr. V. M. Zakharevitch, on the ground of fifteen cases operated on by him during three years, ardently advocates excision both of syphilitic and of soft chancres, and lays down the following rules. 1. Syphilitic chancre must be excised in all cases where its situation permits the fullest possible operation, and when the swelling of the lymphatic glands is not older than two days. 2. Similarly, soft chancres must be excised in all cases where the operation is permitted by their situation. The advantages of excision of soft chancres, as enumerated by the author, are these. *a.* In some cases, excision, with subsequent suturing, leads to healing by the first intention, and thus shortens the period of healing of a chancrous ulcer to the extent of a few days. *b.* It shortens the process of healing to a half or a third of the usual time, even in cases where the operation has not been followed by the application of sutures. *c.* It removes all question of mistakes in diagnosis, with their consequences (the author finds that hard chancre in its initial stage is frequently mistaken for a soft ulcer, in consequence of which the excision is practised only too late). 3. When there exists the slightest suspicion of the real character of a chancroid ulcer, excision must not be followed by the use of caustics or application of sutures; otherwise, if the induration of the wound appear, it may come to observation only too late for treatment (that is, for repeated excision). 4. Excision must be performed under the permanent irrigation of the field of operation, while the operator must most strictly avoid touching the wound with the fingers or with instruments bearing any traces of chancrous fluid. [Dr. Zakharevitch is, we think, the first Russian medical man who has enthusiastically stepped forward to defend the excision of chancres. We doubt, however, that his sympathies will be readily echoed amongst his countrymen, especially now, after Dr. S. P. Tomashevsky has published his fifty cases of excision with fifty absolute failures (*St. Petersburg Inaugural Dissertation*, 1883, pp. 198; and the LONDON MEDICAL RECORD, Feb. 1883, p. 58). The results announced previously by four other Russian observers were also not very satisfactory. Professor V. M. Tarnovsky published ten cases, all failures; Professor P. Gratziansky seven cases, all failures; Dr. Pospeloff two cases, one success and one failure; and Dr. Zarevitch one unsuccessful case.—*Rep.*] V. IDELSON, M.D.

2101. *Rosenberg on a Syphilitic Family.*—M. Rosenberg (*Centralbl. für die Med. Wiss.*, June 23) relates the following case. A man in 1852 contracted syphilis, and had a chancre followed by sore throat and condylomata. The treatment consisted in the application of the cautery, and mercurial pills. Subsequently he suffered from an eruption on his tongue and lips. In January 1859 he married, and in the same year became the father of a daughter, and of a second daughter in May 1861; both these children were healthy. In August 1861, he again contracted an infectious ulcer with glandular swelling; secondary symptoms did not appear, but he suffered from nocturnal pains in the bones, for which iodide of potassium was prescribed with benefit. Soon after the healing of the ulcer he cohabited with his wife, who, two months afterwards, miscarried. In December 1862, his wife bore a son. This child, at first healthy, had, towards the end of the year 1864, roseola and gummata on the right arm, left leg, and anus. In May 1865 another child was born, misshapen and shrivelled, who was suckled by a healthy nurse. In 1866 congenital syphilis showed itself, and only at the age of fifteen began to disappear. W. B. KESTEVEN, M.D.

2102. *Defontaine on Syphilitic Affections of the Joints.*—M. Defontaine describes (*Jour. de Méd. Prat.*, October 1883, p. 461) these affections carefully in his dissertation published by Delahaye. Syphilis may affect the joints in all stages. Arthralgia, for example, is frequent during the first period; subacute arthritis is rare, but may be observed in one or several joints (syphilitic pseudo-rheumatism of Fournier); there is some constitutional disturbance besides the ordinary local signs, but the affection is never accompanied by cardiac or pleural lesions. Hydrarthrosis may also be caused by syphilis; it presents the ordinary signs, is most frequent during the secondary period, and may be cured in a fortnight by the specific treatment. It must not be confounded with a more serious form of hydrarthrosis caused by a gummous infiltration of the perisynovial tissues. In this case, there is a moderate effusion into the joint, and hard square, or ovoid masses can be detected by palpation in the perisynovial tissue; when the knee is affected, the gummous masses are generally found about the superior *cul-de-sac* of the synovial membrane; they are sometimes mistaken for loose cartilages, in consequence of their extreme mobility. When the disease is allowed to run its course, serious lesions of the cartilages and synovial membrane may be the consequence. Another important lesion has been described by Fournier under the name of pseudo-tumor albus; it begins as an enlargement of the epiphysis of a bone, and much resembles an ordinary tumor albus, from which, however, it can be distinguished by the good effects of the specific treatment. J. S. KAESER, M.D.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

RECENT PAPERS.

2103. MOTHE AND LAËNNEC.—Docimasia Pulmonum. (*Gaz. des Hôpitaux*, 1883, No. 56.)

2104. ERMAN.—Mummification. (*Vierteljahrsschr. für Gerichtl. Med.*, Band xl., p. 33.)

2105. MACKAY.—The Markings of Electricity. (*Edin. Med. Jour.*, 1883, Vol. ii., p. 560.)

2106. GAUTIER AND ETARD.—The Fermentation of Albuminous Substances by Bacteria; Ptomaines. (*Comptes Rendus*, Tome xcvii., p. 263.)

2107. FINLAY.—Poisoning by Arsenic. (*Lancet*, 1883, vol. ii., p. 943.)

2108. BISCHOFF.—The Formation of Arsenetted Hydrogen. (*Repert. der Analyt. Chemie*, Band iii., p. 310.)

2109. MCPHEDRAN.—Poisoning by Turpeth Mineral. (*Med. News*, 1883, Vol. ii., p. 682.)

2110. WARFVINGE.—Poisoning by Iodoform. (Schmidt's *Jahrbücher*, 1883, p. 27.)

2111. Palm.—The Detection and Determination of Digitalin. (*Zeitschr. für Analyt. Chemie*, 1884, p. 22.)

2112. Neumann and Pabst.—Poisoning by Benzene and Nitro-Benzene. (*Ann. d'Hygiène*, 1883, p. 426.)

2113. Paschkis, H.—On the Detection of Mercury in Animal Tissues. (*Zeitschrift für Physiol. Chemie*, Band vi., p. 495; *Jour. of the Chemical Society*, 1883, p. 1169.)

2114. Chittenden.—The Distribution of Arsenic in a Human Body. (*Amer. Chem. Jour.*, the *Medico-Legal Jour.*, Vol. i., p. 242.)

2115. Leudet.—Effects of Charcoal Fumes on the Nervous System. (*Jour. de Méd.*, Oct. 1883, p. 472.)

2116. Lucas-Championnière. — Phenol Poisoning. (*Jour. de Méd.*, Oct. 1883, p. 434.)

2117. Taylor.—Adipocerous Changes. (*Boston Med. and Surg. Jour.*, Vol. cix., p. 461.)

2118. Drinkwater.—Reinsch's Test for Metals. (*The Analyst*, 1883, p. 241.)

2119. Baréty and Another.—Stramonium Poisoning. (*Anales del Circulo Medico Argentino; Jour. de Méd.*, December 1883, p. 546.)

2120. Menche.—An Epidemic of Ergotism. (*Deutsche Archiv für Klin. Med.*, Band xxxiii.)

2121. Ramikh.—On a Case of Suicide by Twice Wounding the Heart. (*Proceedings of the Tula Medical Society*, 1882.)

2122. Ringer and Murrell.—Nitrite of Sodium as a Toxic Agent. (*Lancet*, Nov. 1883, p. 766.)

2123. Reid.—Sulphate of Soda in Carbolic Acid Poisoning. (*Brit. Med. Jour.*, Nov. 1883, p. 971.)

2124. Magruder.—Lead-Poisoning from Canned Food. (*New York Med. News*, Sept. 8, 1883.)

Art. 2103. *Mothe and Laënnec on Docimasia Pulmonum.*—Dr. A. Mothe (*Gaz. des Hôpitaux*, 1883, No. 56) has published an interesting medico-legal case in which he was called upon to examine the bodies of two twin infants. The lungs of both were filled with bullæ of putrefaction. Nevertheless, the lungs of the one child floated in water, even after gentle compression of each separate floating portion; whilst those of the other sank even without compression. In commenting upon this case, Dr. T. A. Laënnec (*Jour. de Méd. de l'Ouest*, Dec. 1883, p. 265) insists upon the advantages and necessity of observing anatomical considerations. He insists that the unrespired fœtal lung is a solid, airless, and bloodless organ, in obvious physical properties approximating to the liver and spleen; and he points out how the access of air during the first act of respiration changes all this, there being simultaneous introduction of blood into the capillaries, and lobular aëration of the lungs, with characteristic changes of colour.

2104. *Erman on Mummification.*—Dr. Erman (*Vierteljahrsschr. für Gerichtl. Med.*, Band xl., p. 33) describes two cases of exhumation in which this change was observed. In the one case death had resulted from arsenical poisoning, 3½ grains of arsenious acid being found in the stomach. This corpse had been buried two years. In the other case no arsenic was found, and this body had also been buried for about two years.

2105. *Mackay on the Markings of Electricity.*—Mr. J. Y. Mackay (*Edin. Med. Jour.*, 1883, Vol. ii., p. 560) gives an interesting account of a case in which a boy, struck by lightning, exhibited evanescent markings on the surface of his body; and has made use of the happy idea of reproducing these markings by photography. Four boys, standing together in a doorway, were simultaneously struck by lightning; one was rendered unconscious, and the others partially so. The boy from whom the photograph was taken was, for some time after regaining consciousness, unable to remove his hands from his pockets, where they were at the time he was struck. There was also a sensation of numbness and coldness in the arms, and the boy thought they were broken at the elbows. Afterwards, as he complained of a burning heat, his coat was removed, and the markings observed. These were ramified and arborescent in form, extending from below the left elbow to the shoulder, with branches across the left side of the chest. The marks seemed to radiate from two centres, as if the lightning had first struck the arm in two places, and had thence broken over the surrounding skin. They were popularly believed by many persons to be quasi-photographic images of a yew tree, seventy yards off, or fronds of a fern; but the place where the boy was struck was the door of a stable, and no ferns were in sight. The markings were of a red colour, and did not correspond with the vessels of the region; the skin was slightly raised over them; and the surface-temperature of the arm was greater than that of the rest of the body. For two hours they retained their original appearance, and then faded gradually. In eight-and-a-half hours after the accident they were hardly visible, and entirely disappeared later. They were photographed four hours after the accident. The boy's clothes were unharmed by the lightning, and the buttons and metallic substances in the pocket were uninjured.

2106. *Gautier and Étard on the Fermentation of Albuminous Substances by Bacteria; Ptomaines.*—MM. A. Gautier and Etard (*Comptes Rendus*, Tome xcvii., p. 263) have extended their researches on the formation of putrefaction alkaloids. They had previously shown that the putrefaction of the albumins results in the production of a variety of nitrogenous and non-nitrogenous bodies, as well as of the basic bodies, ammonia, trimethylamine, and ptomaines. They moreover assert, in opposition to some other experimenters, that whatever be the source of the flesh undergoing putrefaction, the chief ptomaines formed are constant in properties and composition. After distillation of the putrefied magma, the residue was extracted successively with ether and alcohol. The ethereal solution contained fatty acids, the ptomaines, and brilliant white pearly scales of calcium amido-stearate. After distillation the liquid was acidified with sulphuric acid, then made alkaline with potash, and the bases extracted with ether. The ptomaines of beef yielded with platinic chloride a precipitate of the platinochloride of hydrocollidine $(C_8H_5N)_2H_2PtCl_6$, which had previously been obtained by the authors from fish; and the mother liquor from this precipitate contained the platinochloride of another ptomaine, a salt which is decomposed at 100° C. with the development of the special odour of its base.

2107. *Finlay on Poisoning by Arsenic.*—Dr. D. W. Finlay (*Lancet*, 1883, Vol. ii., p. 943) relates a rapid case of poisoning of a man by arsenious acid. Twenty-six grains of the acid were taken by mistake in solution in glycerine. The symptoms were collapse, slow feeble pulse, shallow respiration, slight epigastric pain, and pupils inactive to light. There was neither vomiting nor purging, and an emetic did not act. The patient died in one hour, an exceptionally short period. There were no definite *post mortem* lesions.

2108. *Bischoff on the Formation of Arsenetted Hydrogen.*—C. Bischoff (*Repert. der Analyt. Chemie*, Band iii., p. 310) thinks that during the putrefaction of arsenic contaminated substances, not only may arsenetted hydrogen, but also volatile arsenical bases be formed; and he draws attention to the observation, which he says has been made, that the odour of cacodyl compounds has been observed during the putrefaction of corpses containing arsenic, but never under other circumstances of decomposition.

2109. *McPhedran on Poisoning by Turpeth Mineral.*—Mr. A. McPhedran gives details of the death of an infant, which died from the effects of the yellow mercuric subsulphate; and he mentions also another case, a child, in the practice of Dr. Cameron, of Toronto, where fatal diarrhœa resulted from the medicinal administration of the same substance (*Med. News*, 1883, p. 682). These cases are the more important, as Dr. Fordyce Barker has recommended the internal use of turpeth mineral as an emetic. A healthy, well-nourished, but small child, 5 months old, had a croupy cough and slight spasm of the larynx, and for this was prescribed an emetic, two powders, each of three grains of turpeth mineral. Of the first powder, only about two grains were swallowed; and the second powder was administered fifteen minutes later, as the efforts to vomit were abortive. Thus the quantity of turpeth mineral taken was five grains. No emesis followed, but the child was soon evidently in great agony. Shortly afterwards, the bowels acted, and the second and subsequent stools consisted of white coagulated mucus and watery fluid, in which yellow particles, supposed to be turpeth mineral, were suspended. The evacuations were frequent, and then almost continuous. In two hours collapse set in, and death took place in eleven hours. The symptoms were, indeed, like those of corrosive sublimate poisoning. Four-and-a-half-grain doses of the salt, taken from the same bottle, had been previously given to a child, two years of age, with the result of producing gentle emesis only.

2110. *Warfvinge on Poisoning by Iodoform.*—Warfvinge (*Schmidt's Jahrbücher*, 1883, p. 27) gives notes of a case of alleged poisoning by the external application of iodoform to gangrenous sores on the genitals of a woman suffering from typhoid fever. The symptoms were, rise of temperature, restlessness, and collapse; followed by fall of temperature, dizziness, and delirium. On discontinuance of the use of iodoform, these symptoms disappeared.

2111. *Palm on the Detection and Determination of Digitalin.*—R. Palm (*Zeitschr. für Analyt. Chemie*, 1884, p. 22) describes a new and improved method of estimating digitalin, digitalëin, and digitin, and of detecting and estimating the first of these bodies in toxicological analysis. The substance to be examined is extracted with water, and the aqueous solution completely decolorised by means of animal charcoal, filtered, and the filtrate completely precipitated with lead acetate. The solution is again filtered, and the filtrate precipitated afresh with a mixture of lead acetate and an alcoholic solution of ammonia till no more precipitate is produced. This precipitate contains the glucosides of digitalis in combination with lead. After being washed on the filter with water, the precipitate is made into a thin magma with water, decomposed by a stream of sulphuretted hydrogen gas, thrown on to a filter, and washed with water. The filtrate now contains the whole of the digitalëin, whilst digitalin and digitin, in consequence of their insolubility, remain with the lead sulphide on the filter. Chloroform will now extract the digitalin from the insoluble residue, and on evaporation, leaves digitalin in a crystalline condition; and the digitin may be obtained in a pure condition by a subsequent extract with alcohol and evaporation of the solvent. As is pointed out, picrotoxin would be separated along with digitalin; and among poisonous glucosides, solanin would be precipitated by lead oxide without addition of alcoholic ammonia. But the lead precipitates have the following distinctive properties:—1, that with picrotoxin is slimy, and on the addition of concentrated sulphuric acid becomes of a saffron yellow colour; 2, that with digitalin is gelatinous, and on the addition of sulphuric acid becomes of a colour varying from a flesh-tint to a bright red; 3, that with solanin is sandy, and on the addition of sulphuric acid becomes dark red; moreover, on the addition of sugar to the mixture, in a short time a violet, and then a blue colour is developed.

2112. *Neumann and Pabst on Poisoning by Benzene and Nitro-benzene.*—MM. Neumann and Pabst (*Annales d'Hygiène*, 1883, p. 426) have reported on the accidents to workpeople occasioned during the manufacture and manipulation of these substances. To the inhalation of the vapours of benzene they attribute a kind of intoxication not unlike that produced by alcohol, followed by muscular troubles and disturbances of sensibility, anæsthesia, hyperæsthesia, and perversions of intellect (change of character, hallucinations, &c.). Among the chronic effects they signalise loss of sexual functions, and a blackish coloration of the teeth and free edge of the gums. These authors are of opinion that the symptoms of benzene poisoning point to a special action upon the encephalon. Benzene is eliminated chiefly through the lungs, not more than 10 per cent. of the poison being found in the urine as phenol and other derivates. MM. Neumann and Pabst describe the well-known characters of nitrobenzene poisoning, and, among nervous symptoms, mention general convulsions, cramps, isolated contractions of certain muscles (trismus, opisthotonos, &c.). They think that, unlike benzene, its nitro-derivative acts principally upon the spinal cord. After death, the fluidity of the blood, the deformation of its red corpuscles, and the partial transformation of hæmoglobin into hæmatin, are noteworthy.

2113. *Paschkis on the Detection of Mercury in Animal Tissues.*—H. Paschkis (*Zeitschrift für Physiolog. Chem.*, Band vi., p. 495; *Jour. of the Chemical Society*, 1883, p. 1169) has compared several proposed methods for the detection and estimation of mercury in the animal tissues and fluids, and concludes that Ludwig's process, in skilful hands, is neither complicated nor tedious, whilst in point of delicacy it is equal to any other. It is applied to urine as follows. Four hundred cubic centimètres, or three-fourths of a pint of the liquid, are warmed to 60° or 70° Cent. (140° or 158° Fahr.), acidified with hydrochloric acid, and about 3 grammes or 46 grains of zinc dust added. The whole is shaken for some time, the solution poured off, the zinc amalgam washed several times with water, and then with water made slightly alkaline with potash. The amalgam is dried in the water-bath, and introduced into a hard glass tube about one-third of an inch in diameter, closed at one end, with successive layers of asbestos, cupric oxide, and zinc-dust in front.

The tube is then drawn out to a capillary bore, and is heated in a combustion furnace, the cupric oxide being first raised to a low red heat; then the zinc-dust is moderately heated; and, lastly, the amalgam is strongly heated. In ten or fifteen minutes the mercury is found in the capillary portion of the tube, which is then cut off; a fragment of iodine is introduced into the wider part and sublimed, when red mercuric iodide is formed. In this way one-fifth of a milligramme of mercuric chloride, equal to $\frac{1}{440}$th of a grain of mercury, was detected in 400 cubic centimètres, or three-fourths of a pint, of urine.

2114. *Chittenden on the Distribution of Arsenic in a Human Body.*—Prof. Chittenden (*Amer. Chem. Jour.*, the *Medico-Legal Jour.*, Vol. i., p. 242) has reported the results of the analysis of nearly one-half of the entire muscle and bony tissue of the body of a woman disinterred six months after burial, the object being to ascertain the amount of arsenic in the whole body, and to gather all the facts as to the relative distribution of the poison in the dead body. Great care appears to have been taken in sampling the body, and in carrying out the analysis, and the quantities are stated with great minuteness. The left arm, weighing 2 lbs. 11¼ oz., yielded 0·094 grains arsenious oxide; the right leg, except the thigh-bone, 10 lbs. 4 oz., 0·118 grains; transverse section, 8 lbs. 15½ oz., 0·186 grains; pectoral muscle, 1 lb. 2¼ oz., 0·098 grains; dorsal muscle, 1 lb. 6 oz., 0·356 grains of white arsenic. The whole body weighed 57 lbs., and the arsenious oxide present in the muscle and bony tissue, calculated from the above data, was estimated at 1·95 grains; and that in the whole body was estimated at 3·12 grains. The examination also showed unevenness in the distribution of the arsenic, from none or very little in the bones, up to a quarter of a grain in the muscle of the back, and a greater amount in the large vessels and organs of the body, which Professor Chittenden thinks is indicative that the poison was taken but a short time before death.

2115. *Leudet on the Effects of Charcoal Fumes on the Nervous System.*—M. Leudet (*Jour. de Méd.*, Oct. 1883, p. 472) points out that in certain individuals the first effect of the inhalation of charcoal fumes (carbonic oxide and carbonic acid) is to bring about a remarkable state of unconsciousness, due to their action on the cerebral nervous system; and this he illustrates by an actual case. But the peripheral nervous system may also be influenced, and then paralytic affections are the result, which disappear in the course of a few days.

2116. *Lucas-Championnière on Phenol Poisoning.*—M. J. Lucas-Championnière draws attention to the great susceptibility of some individuals, and to the special susceptibility of children to the effects of this poison (*Jour. de Méd.*, Oct. 1883, p. 434). He has seen an infant of six months nearly destroyed by a dose of four grains of phenol; hence it is necessary to begin with small and progressively increasing doses of the medicament of the pure crystallised acid (absolute phenol). This author thus described a form of chronic poisoning by phenol, resembling febrile gastric disturbances; headache, often very severe; anorexia; furred tongue; and the patient complains of extreme depression. In the course of a few days the white tongue becomes red and dry, pyrexia sets in, and the temperature of the body rises—sometimes to 39° or 40° Cent., though often it is only a little above the normal. The patient becomes very irritable. The urine is less obviously affected than in acute cases; it is rarely black, but is usually brown with a green shade, and contains phenol. It is doubtful whether it contains albumen. These results may follow the injection of phenol into the vagina, and into abscesses in cases of septicæmia; and may even supervene when carbolic acid compresses are kept applied to the unbroken skin.

2117. *Taylor on Adipocerous Changes.*—Under the heading 'A Case of Delayed Putrefaction,' Dr. W. H. Taylor, of Massachusetts (*Boston Med. and Surg. Jour.*, Vol. cix., p. 461), describes a case of commencing adipocerous change with some minuteness. A woman, 42 years of age, died after about a fortnight's somewhat indefinite illness, and, as was suspected, from gelsemium poisoning; but eventually, after examination, no poison was discovered in the body, which was buried on March 27, the woman having died on the 24th, three days before the interment. An exhumation was made on May 2, thirty-nine days after death, and thirty-six days after the interment. The soil was dry and a gravelly loam, the grave was five feet deep, and the churchyard was on the top of a hill. The coffin was of ordinary wood, stained. On removal from the grave, the body, which was that of a well-nourished woman, exhibited strongly marked rigidity. The face was fresh in colour, and the eyes were moderately shrunken. The abdominal walls sounded on percussion like those of a frozen corpse. The entire integument was hard, tallowy-feeling, indenting on firm pressure, and the indentations were persistent. There were no indications of putrefaction visible externally. The skin of the abdomen and the whole anterior surface of the corpse was as white and clean as during life. The back and posterior aspect of the arms, forearms, thighs, legs, and neck were of a bright red colour, entirely different from the usual *post mortem* staining; and this colour extended half way up the lateral aspect of the body and limbs. The colour was that of a part reddened by inflammation, but a brilliant bright red. On making a median section, the feel was that of cutting through soap or tallow; the margins of the cut had to be forcibly separated, and would then remain in the position in which they were placed. The abdominal cavity was perfectly dry. The viscera were as fresh as if the subject had died within a few hours; even the spleen was hard and firm. The pleural cavities were nearly dry. The lungs were fresh. The heart was collapsed and dry, its walls were flabby, and the muscular fibres were somewhat fatty under the microscope. The brain and spinal cord were slightly softened. No odour of decomposition was perceptible about the body, either before or after section. An animal odour was perceived, which resembled, but was not quite, an urinous odour, and was not disagreeable. Adipocerous changes are stated to have been common in bodies buried in this churchyard.

2118. *Drinkwater on Reinsch's Test for Metals.*—Dr. Drinkwater (*The Analyst*, 1883, p. 241), in writing on the occasional presence of selenium in sulphuric acid, points out that, when hydrochloric acid is made by distilling sodium chloride with seleniferous sulphuric acid, all the selenium passes into the distilled acid. On boiling pure copper with the impure hydrochloric acid made as described, a deposit was obtained which resembled in all outward appearance an arsenical deposit. On heating this in a tube a crystalline sublimate was obtained, which

differed, however, from an arsenical deposit both in the shape of the crystals and in its colour. The sublimate dissolved in strong sulphuric acid with a characteristic greenish-brown colour, and was precipitated in red flakes on the addition of water—characteristics which distinguish it from other deposits of similar appearance.

2119. *Baréty and Others on Stramonium Poisoning.*—An aged woman (*Anales del Circulo Médico Argentino*) was ordered by her medical attendant to take occasionally a small cupful of an infusion of stramonium—15 grains to the quart. By mistake she made the infusion in the proportion of 26 grammes to 150 grammes of water (1 to 6). After taking a third dose of this, she became loquacious, and suffered from hallucinations. The whole body was pronouncedly lower in temperature, which fell to 27°–32° C. The skin had an earthy aspect; the pupils were highly dilated. The surface of the body was bathed in cold, viscid perspiration. Voluntary movements were not co-ordinated; the hands were tremulous. The respirations were rapid and unequal; the pulse thready, unequal, imperceptible in the radial, but perceptible in the temporal artery. An emetic and laxative enemata both proved inoperative, but a tobacco enema produced an evacuation, followed by vomiting; and this was followed by recovery. M. Baréty also (*Jour. de Méd.*, Dec. 1883, p. 546) relates a case of stramonium poisoning in a child, successfully treated by electricity, so as to keep up movements in a manner similar to the well-known method of treatment in opium poisoning.

Thos. Stevenson, M.D.

2120. *Menche on an Epidemic of Ergotism.*—Dr. Menche (*Deutsche Archiv für Klin. Med.*, Band xxxiii., and *Centralbl. für die Med. Wiss.*, Sept. 29) relates the following case. In the autumn of 1879, and in the spring of 1880 and 1881, an epidemic of ergotism prevailed in Upper Hesse. The summer of 1879 was wet and cold, and much corn was blighted. In many instances, the proportion was as much as two per cent.; bread made with the damaged grain was of a darkish colour, and had a sweetish taste. The number of persons attacked was, according to the medical men, about five hundred; there were two hundred cases officially reported. About five per cent. of these died. In one place there were forty-six persons affected by it, men and women alike. Infants at the breast escaped. In other children, the symptoms occurred in about five days. The illness also appeared quickly in lying-in women.

W. B. Kesteven, M.D.

2121. *Ramikh on a Case of Suicide by Twice Wounding the Heart.*—In the *Proceedings of the Tula Medical Society*, 1882, Dr. Ramikh communicates the following case. A medical assistant having killed his betrothed with a dagger, immediately afterwards inflicted on himself, with the same weapon, six wounds in the left side of the chest. The *post mortem* examination showed that four of the wounds were only superficial, reaching the surface of the ribs; but the remaining two wounds, one in the fifth intercostal space, another in the sixth, penetrated into and through the wall of the left ventricle; they were parallel with each other and almost perpendicular to the long axis of the ventricle's cavity, and measured in length nearly one inch each. The heart was bloodless, but the pericardial sac was distended by an enormous quantity of partly fluid, partly coagulated, blood. Dr. Ramikh thinks that it is the first published instance of suicidal double wound of the heart.

V. Idelson, M.D.

2122. *Ringer and Murrell on Nitrite of Sodium as a Toxic Agent.*—Drs. Ringer and Murrell, in the *Lancet*, Nov. 1883, p. 766, publish some experiments made on cats, and find that it is a powerful toxic agent: a cat weighing about 6 lbs. was killed in twenty minutes by an injection of a little over six grains of nitrite of sodium. These experiments were followed up by Dr. Murrell, who gave a dose of 10 grains of the pure nitrite to eighteen individuals, and seventeen of them declared they were unable to take it. Next it was given in five-grain doses to sixteen patients, nearly all of whom complained of faintness, nervousness, nausea, &c., and were unable to take another dose. In Dr. Ringer's therapeutics the dose is stated to be as much as 20 grains, but now it has been reduced to two, three, or four grains; the reason being that the salt originally used was largely adulterated with the nitrate of soda, but when the pure nitrite is used, one or two grains are sufficient.

2123. *Reid on Sulphate of Soda in Carbolic Acid Poisoning.*—Mr. J. Reid, in the *Brit. Med. Jour.*, Nov. 1883, p. 971, reports a case of a woman, aged 35, who drank rather less than four fluid ounces of crude carbolic acid. About an hour after taking the poison, four drachms of sulphate of soda, dissolved in five ounces of water, were injected into the stomach; two hours later, three quarters of an ounce of the salt, in five ounces of water. After each injection the patient appeared to be somewhat relieved in breathing. Four hours after this, another three quarters of an ounce of sulphate was injected, and the patient appeared easier, but she died about forty minutes afterwards. Sulphate of soda has succeeded in animals, and the above case proves that its action is worthy of further investigation.

Richard Neale, M.D.

2124. *Magruder on Lead-Poisoning from Canned Food.*—Dr. Magruder (*New York Med. News*, Sept. 8, 1883) describes a case of well-marked saturnine paralysis, which he traced to a contamination with lead of the tin lining of some cans containing corn, of which the patient, a lady, had partaken. The corn was put up by a receipt that required the use of tartaric acid. The contents of several cans were tested, and the presence of lead detected. This must have been derived either from the coating of the cans, or the solder, or both. Upon applying a drop or two of nitric acid to the surface of the can, allowing it to dry, and adding a solution of iodide of potassium, there was found the characteristic yellow spot. The same test was then applied to a number of cans in which food had been preserved, and in all evidence of the presence of lead was found. A more extended chemical analysis of a number of scraps of tin of which cans are made, found only two which did not show its presence. The writer quotes other observers to show that much of the coating upon the cans is not pure tin, but an alloy with lead. No facts are as yet known which show tin as forming any compounds with the vegetable acids which give rise to poisonous effects, either acute or chronic, but it is known that lead forms such compounds. The writer quotes from the *Quarterly Compend. of Med. Science*, July 1883, an account of an outbreak of lead-poisoning among 150 men of a regiment in the Southern Tyrol, one case ending fatally, and forty-five requiring to be treated in hospital, besides

others who were not disabled for duty. The cause of the outbreak was traced to the tin-lined copper vessel in which their food was cooked, the coating of which contained lead.

MEDICAL CHEMISTRY.

RECENT PAPERS.

2125. Horbaczewski. — Synthesis of Uric Acid (*Monatschr. Chem.*, Vol. iii., p. 796.)

2126. Smith. —The Phosphatic Precipitate obtained on Heating Urine. (*Dublin Jour. of Med. Sciences*, July.)

2127. Wasilieff. —Nitrogenous Metamorphoses in Typhoid Fever. (*Centralbl. für die Med. Wiss.*, April 7.)

2128. Georgiewsky. — Ehrlich's Urinary Test. (*Deutsche Med. Wochensch.*, Nov. 28.)

2129. Lépine and Guérin. —The Source of the Sulphur in the Urine, which is with difficulty Oxidised.

Art. 2125. *Horbaczewski on the Synthesis of Uric Acid.*—Horbaczewski (*Monatschr. Chem.*, Vol. iii., p. 796; *Jour. Chem. Soc.*, 1883, p. 179) has recently achieved the synthesis of uric acid from urea by heating the latter in a sealed tube in conjunction with glycerine to a temperature of 200 to 230° C. From the residual mass, uric acid was obtained in the form of crystals. Thomas Stevenson, M.D.

2126. *Smith on the Phosphatic Precipitate obtained upon Heating Urine.*—Dr. W. G. Smith (*Dublin Jour. of Med. Science*, July 1883) draws attention to some observations of Salkowski in the *Zeitschr. für Phys. Chemie*, 1883, Band. vii., p. 119, which are, that after precipitating phosphates in urine by heat they re-dissolve on cooling, that the reaction of the urine undergoes no change on heating, and that the amount of carbonic acid present in urine (4·4 to 14·3 per cent.) is too little to dissolve calcium phosphate; that the reaction of urine can be imitated in a solution which contains nothing but calcium chloride and primary potassium phosphate (KH_2PO_4). The deposit of a cloud on heating depends upon two conditions: (*a*) the reaction; (*b*) the proportion of calcium present. If too much calcium be present, the precipitate will not redissolve on cooling. Smith has repeated Salkowski's observations, and finds that the precipitate in urine is scarcely ever entirely redissolved on cooling, that the reaction of the urine remains unchanged by heating, and that such a solution as Salkowski describes failed to imitate the reaction of urine until a little sodium phosphate (Na_2HPO_4) was added, so he supposes Salkowski worked with an impure salt. He thinks the following formula illustrates the change effected by heat:— $2(CaH_2P_2O_8) + CaH_4P_2O_8 = Ca_3P_2O_8$ (insoluble) + $2CaH_4P_2O_8$ (soluble). Upon reduction of temperature the inverse change would occur, attended with the resolution of the tricalcic phosphate in part or in full, according to the relative amount of acid phosphates present.

2127. *Wasilieff on Nitrogenous Metamorphoses in Typhoid Fever.*—J. M. Wasilieff (*Centralbl. für die Med. Wiss.*, April 7) found in twenty-five cases of relapsing fever, that in twenty-three, at the height of the fever, there was a diminution in the quantity of urine and urea, with fluctuation of the bodily weight. The quantity of urea was at its highest in the crisis, as was also, with very few exceptions, the amount of urine, while the weight of the body fell considerably. During apyrexia the quantity of urea and urine was, at first, large; then it fell, and then shortly before a fresh access of fever it would rise to a great height; the bodily weight, at the same time, sinking, before the relapse, very rapidly. The amount of urea and urine showed two maxima (the beginning and the crisis) and one minimum (the acme). These relations of the urea and urine with regard to the weight of the body occurred without marked elevation of temperature. In eighteen cases of typhus exanthematosus, it was noted that, on the seventh or eighth day of the fever, there were a decrease in the quantity of urea, an augmentation of urine, and a decrease of bodily weight. Afterwards the proportion of urea fell, while the urine and bodily weight remained unaltered. With the decline of fever, the quantity of urea and urine again rose. If the fever persisted, this increase would be found to correspond with the normal temperature, the bodily weight at the same time falling. These relations of the urinary excretion appear to the author to a retention or imperfect oxidation of nitrogenous elements. Leucin and tyrosin were found only twice in twelve cases. This retention of nitrogenous material, the author considers also to be the cause of the fall in temperature.

W. B. Kesteven, M.D.

2128. *Georgiewsky on Ehrlich's Urinary Test.*—Dr. J. Georgiewsky writes to the *Deutsche Med. Wochensch.* of Nov. 28, giving the result of his experiments with the new urinary test introduced by Ehrlich. This consists in adding to the urine a test solution prepared in the following manner. One hundred cubic centimètres of distilled water are acidulated with 6 to 8 of pure nitric acid, and sulphanilic acid is added to saturation, until a precipitate is formed. About 15 or 20 grammes are required. Two or three small pieces of sodium nitrate, of the size of a hempseed, are then dissolved in water and added to the former solution, which now contains sulpho-diazobenzol, the active agent in the test. A test-tube is filled one-third full with the urine to be examined, another third is filled with the reagent, and a small quantity of ammonia or caustic potash is added. Ehrlich says that in normal urine the first addition causes no change of colour, or at most a pale yellow; after the addition of the ammonia a yellowish tinge appears, deepening to orange; and, on standing, a precipitate falls, which is either colourless, or with a slight red line at its upper part. In pathological urine the addition of the ammonia causes a carmine or purple colour in the fluid, and the precipitate is dark green, with, occasionally, a violet line. This reaction never takes place in normal urine, or in a febrile urine except in pulmonary phthisis. In typhus (both abdominal and exanthematic) and in measles, it is always present; in croupous pneumonia and diphtheria, never; its presence, therefore, in those diseases indicates some complication; and in other febrile conditions it is sometimes present, sometimes absent. In those diseases where it is found, its disappearance or considerable diminution generally precedes a fall of temperature. Dr. Georgiewsky has made some controlling experiments, which have in a great measure agreed with thosé of Ehrlich, but a sufficient number have not yet been made to establish the test as a reliable one.

Alice Ker, M.D.

2129. *Lépine and Guérin on the Source of the Sulphur in the Urine which is with difficulty Oxidised.*—MM. Lépine and G. Guérin confirm the statement

of M. Künckel, that a portion of the incompletely oxidised sulphur in the urine is derived from the taurine. The authors have found that all this incompletely oxidised sulphur does not behave in an identical manner in the presence of chlorine, and especially of bromine; that, while one part is completely oxidised by one or other of these agents, the greater part requires for its complete oxidation to be calcined with potassic nitrate and hydrate. The part which resists the action of bromine is the sulphur of biliary origin. This is shown by experiments on dogs, which increase the amount of reabsorbed bile, and also the quantity of the oxidation-resisting sulphur in the urine. But that some of this form of sulphur has other than a biliary origin, is proved by the fact of its presence in the urine of a dog whose bile-secretion escaped entirely through a fistulous opening. The same form of sulphur is excreted abundantly in some pathological states, unassociated with an excessive formation and reabsorption of bile, as in some forms of pneumonia, in different cachectic conditions, and in acute lead-poisoning unassociated with jaundice. GEORGE JOHNSON, M.D.

ANATOMY.

RECENT PAPERS.

2130. GAGLIO AND DI MATTEI. — Inequality of Development and of Weight of the Cerebral Hemispheres, (*Riv. Sper. di Freniatria*, and *Gazz. Med. Ital. Lomb.*, June 2.)

2131. ROBINSKI.—The Length of the Fibres of the Crystalline Lens. (*Cent albl. für die Med. Wiss.*, 1882.)

2132. HARZ.—Histology of the Ovary in Mammals. (*Archiv für Micr. Anat.*, Band xxiii., and *Centralbl. für die Med. Wiss.*, Sept. 22.)

2133. SOLGER.—The Combined Employment of Osmic Acid and Nitrate of Silver. (*Centralbl. für die Med. Wiss.*, May 12.)

2134. ARNOLD.—The Nuclei and Nuclear Segmentations in the Cells of the Marrow of Bones. (Virchow's *Archiv*, Band xciii.)

ART. 2130. *Gaglio and Di Mattei on Inequality of Development and of Weight of the Cerebral Hemispheres.*—The authors, contrarily to Luys (who, from his observations, found that normally the left hemisphere is more developed and more heavy than the right by 5 or 6 grammes, and pathologically the opposite), from the examination of fifty-nine cases, maintain that the cerebral hemispheres are rarely perfectly exact in weight, but that sometimes one, sometimes the other, is the heavier, and that in half the right is heavier than the left by 4 grammes. Crichton Browne had already found in 400 insane a prevalence in weight of the right over the left hemisphere, and had declared that this fact became still more manifest in those of sound mind. Anatomy then lends no support to those who maintain that the functional superiority of the left hemisphere is greater than that of the right.

G. D'ARCY ADAMS, M.D.

2131. *Robinski on the length of the Fibres of the Crystalline Lens.*—There have been no recent investigations on the exact length of the fibres of the crystalline lens. Huschke considered that the fibre corresponded nearly in length with the distance of the pole from the periphery. Kölliker again showed that no fibre extended through an entire half circumference of the lens, *i.e.* from anterior pole to posterior pole, but that it always ended on the opposite surface from that on which it began, and that the different terminations of the fibres formed on each surface a stellate figure. Dr. Robinski (*Centralbl. für die Med. Wiss.*, 1882) gives the result of his measurements of the lens in the newly born infant. The lenses were prepared in weak hydrochloric acid, and the measurements made with a pair of compasses. The length of the fibres in a section was $2\frac{1}{4}$ lines. Apparently, the size of the human crystalline lens varies much from many causes, and further data are needed in regard to the influence of race, age, and sex. The size and form of the lens are also influenced by many individual peculiarities. He finds that Huschke's measurements are about one-third too short. If we follow a fibre which starts from the middle of the anterior surface, we find that it ends more or less precisely at the junction of the outer with the middle third posteriorly. The adjoining fibre begins anteriorly one fibre's breadth from the middle point, and extends to a point as much nearer the posterior pole, so that finally the fibres commencing at the junction of the outer and middle-thirds of the radius on the anterior surface reach the posterior poles. A similar arrangement of fibres is found in the majority of mammals, the rodents being exceptions. R. MARCUS GUNN.

2132. *Harz on the Histology of the Ovary in Mammals.*—There are found in the ovaries of various mammalia, structures of an epithelial nature, partly in long bands, partly as canals, partly in groups of cells, which differ from those of the germinal epithelium. Epithelial structures in the ovary can only originate from one of two sources, either from the germinal epithelium, or from the segmental system (Wolffian bodies, glomeruli, and structures thence derived). With reference to the epithelial structure, above alluded to, it is developed later, in the form of canals or bands, from the mesovarium. Traces of this structure may be found in the tissues about the hilus of the ovary in sheep; in the human ovary, and in those of swine, all traces disappear. N. Harz (*Arch. für Micr. Anat.*, Band xxiii., and *Centrabl. für die Med. Wiss.*, Sept. 22) refers to the researches of Max Braun upon these elements of the segmental system. Their development varies in different animals. In some groups they, with the connective tissue of the stroma, constitute the greater part of the organ. In others, the segmental cells reach the ovary only when a follicle is ready formed. On these grounds it is assumed that the bands are an essential element of the follicle and its contents, and that, by the subdivision of the segmentary cells, they form the corpora lutea. Harz states that the primordial ovum is derived from the germinal epithelium, filling the spaces in the ovarian stroma, where they are fixed by an albuginea. Their formation begins at a point in the ovary, furthest from the mesovarium. The author further considers that the ovum is derived from the membrana granulosa, within the stroma of the ovary. The exact mode of its formation remains to be shown.

2133. *Solger on the Combined Employment of Osmic Acid and Nitrate of Silver.*—Dr. B. Solger, of Halle (*Centralbl. für die Med. Wiss.*, May 12), describes this process. A portion of sciatic nerve of a frog is treated with a one per cent. solution of osmic acid. The partly detached nerve-fibre, having been left to the action of this reagent for some minutes, is placed for three minutes in a one-

third solution of nitrate of silver and then exposed to the light. It is a matter of indifference that the osmic acid should first be washed off in distilled water. After fifteen minutes' immersion in the mixed solution, Ranvier's cross markings at the nodes will be plainly shown, more or less brightly silvered. If, then, to a small quantity of the solution in a watch-glass from five to ten drops of nitric acid be added, the silver impregnation of the cylinders is affected so as to restore the circular markings of the axis-cylinders. The points of junction of the segments of the Schwann's sheath (Ranvier) have the same disposition towards nitrate of silver as is shown by the cement of epithelioid cells, whether alone or with the osmic acid. The addition of nitric acid exerts great influence on these reactions, dissolving the brown silver precipitate. Dr. Solger refers also to a method of bleaching introduced by Dr. Paul Meyer, which consists in the addition of a few drops of concentrated nitric or hydrochloric acid to a texture that has been in chloride of calcium, whereby chlorine is set free, and bleaching is effected as by the employment of peroxide of hydrogen.

2134. *Arnold on the Nuclei and Nuclear Segmentation in the Cells of the Marrow of Bones.*—J. Arnold (Virchow's *Archiv*, Band xciii., and *Centralbl. für die Med. Wiss.*, Sept. 15) says that the abundance of giant-cells in the medulla of the bones of puppies and guinea-pigs, artificially rendered anæmic, allows the division of the nuclei into two classes. Those of the first kind are clear, sharply defined, sometimes globular, sometimes flattened, or appearing as rolled up coils of tortuous bands, their bodies and filaments only taking colouring matters. The nuclei of the second sort are also bright; these colour more or less uniformly. The simplest form of these is that of a globule presenting on the surface depressions, which stain only slightly or not at all. From this form, changes may be traced to a resemblance of an open basket. The trabeculæ of the surrounding network which adjoins the surface of the nuclei are of unequal diameter. Their interior is filled with a colourless fluid. The limit between this protoplasm and the nuclear outline is only to be seen in the simplest forms. Arnold considers that these different forms of nuclei must be traced back to one fundamental form, both forms being different stages of the same course of development. The first are the precursors of the second class, which have undergone a change in their chromatic properties. From this complex form minute fragments are detached, which become independent nuclei, and are filled with a thin fluid. In this manner young cells are formed, and are detached from the parent-cells. All these indirect subdivisions may be observed in these younger cells; in the giant-cells also transformations of the coils and star-like figures may be traced. These observations are opposed to those views which regard these cells in the medulla as retrograde elements. They are, on the contrary, shown to be advancing growths, either the products of segmentation of young cells, or a temporary condition of the red blood globules. The ordinary medullary cells of bone can be distinguished among these by their granular protoplasm and shining nuclei. Cells are frequently met with having several nuclei connected together by fibrillæ, which can scarcely owe their origin to segmentation. These observations, Arnold states, have not been derived from the study of hardened and stained preparations, but from that of fresh objects before *post mortem* changes had taken place. It is probable, the author further remarks, that nuclei may be divided into two, three, or more unequal segments; and he designates this as 'fragmentation,' with or without change in chromatic properties, not differing essentially from the indirect nuclear segmentation of other authors.

W. B. Kesteven, M.D.

REVIEWS.

Article 2135.

Elements of Pharmacy, Materia Medica, and Therapeutics. By William Whitla, M.D., Physician to the Belfast Royal Hospital, Consulting Physician to the Ulster Hospital for Diseases of Women and Children, &c. With Lithographs and Woodcuts. Second Edition. London: Renshaw. 1884.

That a large edition of this admirable little work on Materia Medica and Therapeutics should have been exhausted in so short a time may be regarded as a proof that it meets the requirements of students. On its first appearance we felt bound to protest against the meagreness of the information on the non-officinal remedies. This, we are glad to see, has now been entirely remedied, and it is evident that Dr. Whitla has spared no pains to keep himself thoroughly acquainted with the most recent advances in therapeutical science. The notes on the new remedies are clearly and concisely given, and constitute one of the most valuable features of the book. Every page has undergone careful revision, and the author may be congratulated on having produced a work which will take a foremost place amongst manuals of Materia Medica. It is admirably adapted for examinational purposes, and will undoubtedly be a great favourite with students.

William Murrell, M.D.

Article 2136.

Poisons: their Effects and Detection. By A. Wynter Blyth, M.R.C.S. London: Charles Griffin & Co. 16*s*.

This is the second volume of a new and enlarged edition of the author's work on *Practical Chemistry*, embodying his own views and experiences, whilst summarising the labours of other workers in the same field. It forms a handsome volume of 700 pages.

Mr. Blyth is evidently a great lover of old literature. The work commences with an introduction on old poison-lore and a history of toxicology, both of which are of extreme interest. Indeed, throughout the work, the bibliography, and the copious references to papers in foreign journals, form not the least valuable portion of the book. To the expert, for whose use *Poisons* is chiefly adapted, these references will form, moreover, its chief value, since the work shows marks of haste, and its statements are sometimes not reliable.

For example, on p. 104, sodic nitrite is stated to produce symptoms very similar to those produced by the nitrate, a statement which is contrary to the experience of all recent observers. Again, the strengths of many of the best-known opiates are incorrectly given; and, on p. 339, Fleming's tincture of aconite is said to be one-third stronger in

alkaloids than the officinal tincture. This is surely incorrect. These are examples taken at random from the book, which is too elaborate to allow a critical examination in all its details. They are blemishes which may, however, be readily corrected in future editions.

In physiological testing, Mr. Blyth, in the case of such a delicate poison as aconitine, prefers administration by the mouth to the use of hypodermic injections. We differ from him in our views as to this, and are confident that the general substitution of administration by the mouth for subcutaneous injection would often end in failure to detect the substance sought when this is an alkaloid.

The book is one which we can on the whole highly commend. A chapter on treatment is added; and for this Dr. Murrell's little treatise has been obviously largely borrowed from, and, apparently, without adequate acknowledgment.

THOMAS STEVENSON, M.D.

ARTICLE 2137.

The Diseases of Children. By ARMAND SEMPLE, M.B., M.R.C.P., Physician to the North-Eastern Hospital for Children.

THE author has produced a handy little book, which will prove of great service to the senior student and junior practitioner, both of whom are, as a rule, lamentably ignorant of children's diseases. The introductory chapter deals at some length with the anatomy and physiology of childhood, including remarks upon development, locomotion, dentition, the various temperaments, &c., and concludes with some valuable hints for the clinical examination of children. The body of the work contains the diseases of the different organs; but we are at a loss to know why prolapsus ani should have been placed under diseases of the urinary organs, more especially as no allusion is made to its occasional connection with stone in the bladder. May we also venture to doubt whether a wax candle is 'useful' for a baby to gnaw at when teething? These are trifles, however, and we can confidently recommend the work as containing a large amount of information succinctly stated, in clear type and on good paper.

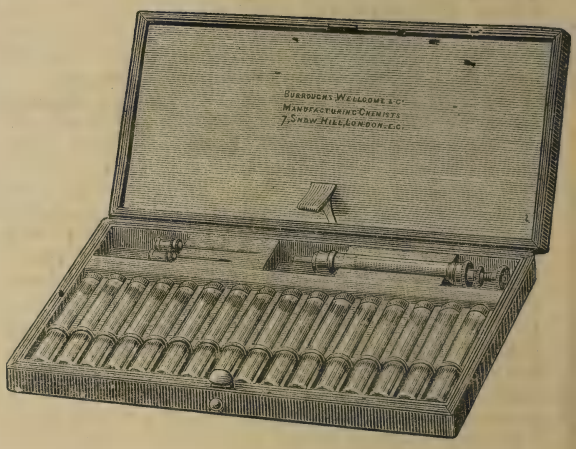
RALPH LEFTWICH, M.D.

NEW INVENTIONS.

ARTICLE 2138.

MESSRS. BURROUGHS & WELLCOME'S HYPODERMIC CASE.

MESSRS. BURROUGHS & WELLCOME have recently issued a pocket-case containing a selection of Wyeth's compressed hypodermic tablets. These tablets are so well known that it is hardly necessary to describe them; each contains a dose of some alkaloid or active principle, with just enough sulphate of soda to give it the requisite consistence. When required for use, the tablet is placed in a spoon with a few drops of water, crushed with the top of the hypodermic syringe, and then injected. It is sometimes said that warm water should be used, or that the spoon should be heated over a candle; but it is not necessary, for the sulphate of soda dissolves very quickly, and the whole operation, injection and all, need not occupy more than half a minute. A writer in the *British Medical Journal* states that he has employed most of the tablets in cases requiring treatment, and finds them perfectly active. For example, to a woman suffering acute pain, the result of rheumatoid arthritis, he gave an injection of one of the tablets containing the third of a grain of sulphate of morphia, and almost immediately she experienced relief, and fell asleep. In another case, a third of a grain of pilocarpine produced profuse sweating and salivation, the symptoms being subsequently stated by the same authority to be arrested by one of the atropia tablets. The apomorphia tablets are excellent; a tenth of a grain injected under the skin of the arm in a patient in whom it was necessary to administer a prompt emetic, causing copious vomiting in four and a half minutes. In severe cases of obstinate neuralgia, the aconitia tablets, given night and morning, afforded marked relief. The case itself is neat,



and is conveniently arranged. It is made to hold sixteen tubes, each containing from twelve to twenty tablets. Almost any drug can be obtained in this convenient form, the selection being varied according to the requirements of the purchaser.

ARTICLE 2139.

NEW INVALID APPLIANCES.

THE useful appliances for invalids confined to bed figured below are inventions of Mr. Newton Nixon, of University College Hospital, and have been in use in that institution with the entire approval of the medical staff. They are manufactured by Messrs. Mayer & Meltzer, of 71 Great Portland Street, London; Lonsdale Street East, Melbourne; and Bond Street, Leeds.

FIG. 1. *Bed-Rest with Foot Support.*—This rest was designed after a long practical experience in the wards of hospitals of the discomforts in connection with the use of the existing forms of bed-rests, both for hospital and for private purposes. The principal features in the rest are as follows: (*a*) A foot-support, to retain the patient in a comfortable position *without strain*, and to prevent pressure of bedclothes upon the toes; (*b*) Lightness, and adjustability to a selected angle; (*c*) Webbing in place of cane to prevent the pillow from slipping.

This appliance was awarded a certificate of merit at the International Medical and Sanitary Congress,

London, 1882, and an honourable mention at the National Health Society's Exhibition, London, 1883.

Fig. 2. *Bed-Rest with Sliding Arms.*—The rest will be found a great comfort to patients and invalids when sitting up in bed. The arms slide vertically and horizontally, and can consequently be adjusted to suit any width or height. The arms, in addition, are on hinges, and are fitted with a rack in order to alter the angle to suit the position of the patient.

Fig. 3. *Bed-Table.*—The table can be adjusted to the frame of any ordinary hospital or infirmary bed

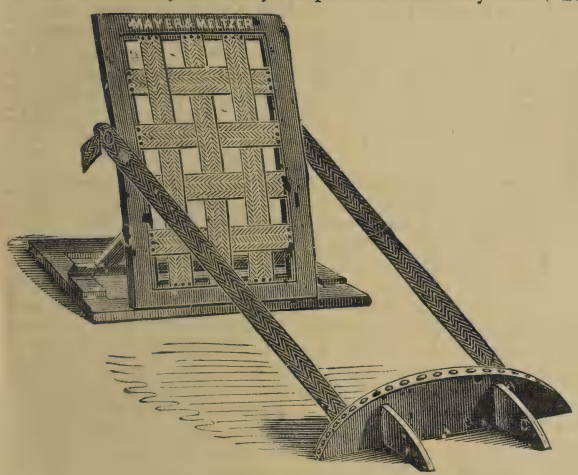


Fig. 1.

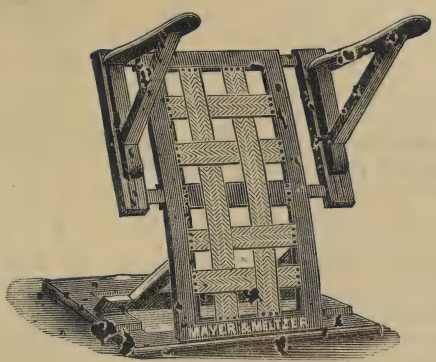


Fig. 2.

or cot, the steel legs giving considerable play. The table is much valued as a support for the elbows of patients who experience difficulty in breathing, as a table for reading and writing purposes, or during the meal-times. It is also found very useful as a table

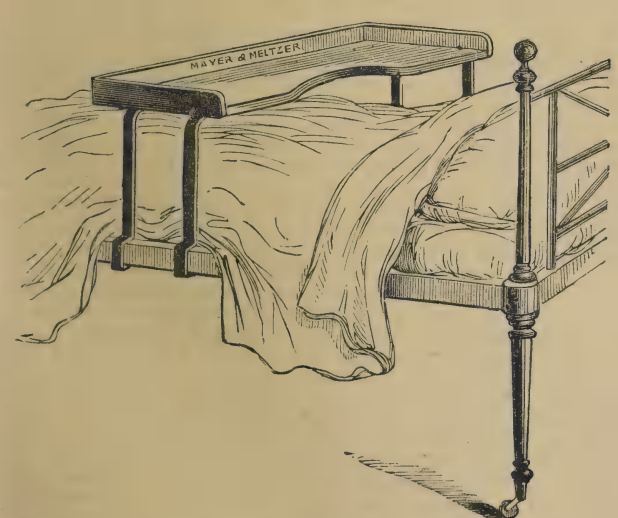


Fig. 3.

n connection with the dressing of cases in surgical wards.

Fig. 4. *Excreta or Bed-pan Cage.*—This cage was designed to meet a most pressing want in connection with the sanitary requirements of institutions for the treatment of large numbers of sick people. The cages are used for storing the excreta of patients for inspection by the medical men at their next visit, and are fixed in the outer walls. As the visit may not take place for a considerable time after the evacuation, the necessity for the above provision becomes apparent. The cages are perforated on three sides, and open to the inside of the building by air-tight doors.

This very much needed invention was awarded a certificate of merit at the International Medical and Sanitary Congress, London, 1882, and also a silver medal at the National Health Society's Exhibition, London, 1883.

Fig. 5. *Bronchitis or Tracheotomy Kettle.*—This kettle does away with the necessity for waterproof sheeting over the bed, as it is designed to carry off

Fig. 4.

the condensed steam. No lid is required. The kettle is heated over a gas-ring, and not on the fire, although it can be used in either way. It can be placed in any part of a ward or room by regulating the length of India-rubber tubing. The kettle can

be adapted for use by either adults or children as the spout is made in sections. It was awarded an

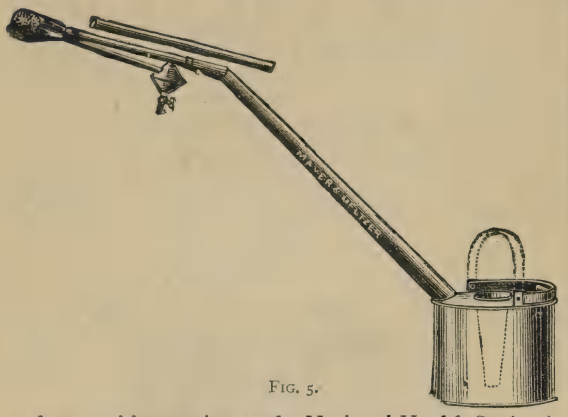


FIG. 5.

honourable mention at the National Health Society's Exhibition, London, 1883.

ARTICLE 2140.

KAIRIN.

MESSRS. BURGOYNE, BURBIDGES, & CO. have recently introduced to the profession in this country a new and valuable febrifuge, known as kairin. It was discovered by Fisher, of Munich, and may be regarded chemically as the hydrochloride of oxyethyl-quinolin-hydride. It effectually reduces the temperature in nearly all febrile diseases, without the production of headache, nausea, vomiting, or other disagreeable symptoms. Its action has been investigated by Filehne, of Erlangen, who employed it with much success in the treatment of a number of cases. Paul Guttmann, whose name is well and favourably known in connection with therapeutical investigations, tried it experimentally in forty-two cases, including pneumonia, measles, phthisis, typhoid fever, scarlatina, pleurisy with effusion, peritonitis, erysipelas, ague, and septicæmia. In gramme doses, frequently repeated, it always reduced the temperature to the normal in a few hours. Knipping, of Neuwied, and Merkel, of Nürberg, have obtained equally satisfactory results. We know of several cases in which the drug has been used successfully in this country in the treatment of the acute specific diseases. It is best given in wafers or in Parke, Davis, & Co.'s empty gelatine capsules, which can be obtained from the same firm. The price of kairin is now materially less than that of good quinine.

MISCELLANY.

PROHIBITION OF THE USE OF SALICYLIC ACID AND THE SALICYLATES IN THE CONSERVATION OF ALIMENTARY SUBSTANCES.—The Commission of Public Hygiene in France, confirming their decision of 1880 and 1882, have recommended the Ministry of Commerce to prohibit absolutely the employment of salicylic acid and the salicylates in the conservation of alimentary substances. In his report M. Brouardel draws attention to the following facts. 1. For healthy persons the daily use of a dose, although small, of salicylic acid—if not absolutely harmful—is still undesirable. 2. For persons affected by any renal or hepatic alterations, either from age or any form of degeneration, the ingestion of a daily dose of salicylic acid is decidedly harmful, since the elimination of the acid is irregular.

EXPLOSIVE MIXTURES.—*L'Indépendente* of Oct. 1883 gives the following list of explosive mixtures. 1. Hyposulphite of lime, chlorate of potash, and sulphite of iron, mixed in equal proportions, are explosive. 2. A solution of one part of chromic acid and two of glycerine. 3. Chlorate of potash and dentifrice powders containing carbon. 4. A pill-mass, containing permanganate of potash, mixed with vegetable extracts and iron, easily inflames. 5. Chlorate and permanganate of potash, and other explosive substances, ought not to be triturated with glycerine. 6. Chlorate of potash explodes when triturated with tannin or with sugar. Iodine, and sometimes an iodide, may explode if mixed with a nitrate.

JAPANESE CAMPHOR.—The following account of the camphor industry of Japan is extracted from the interesting report by the American Consul at Nagasaki. 'The manufacture of camphor is an important industry on the Island of Kiu Shiu (Kew Shew). From the port of Nagasaki there were exported in the year 1882, 15,186·18 piculs, valued at 227.792 dollars. A picul is 133⅓ lbs. From other ports of the island, not yet open to foreign trade, a large quantity was shipped by native merchants in native vessels to Shanghai in China, and Hong Kong, whence it finds its way to India and England; little or none of it is exported to the United States. The camphor tree grows abundantly all over this portion of Japan. It is found alike on high elevations and in the valleys and lowlands. It is a hardy, vigorous, long lived tree, and flourishes in all situations. Many of these trees attain an enormous size. There are a number in the vicinity of Nagasaki which measure ten and twelve feet in diameter. The ancient temple of Osuwa at Nagasaki is situated in a magnificent grove of many hundred grand old camphor trees, which are of great age and size, and are still beautiful and vigorous. I am told that there are trees in other places in Kiu Shiu measuring as much as twenty feet in diameter. The body or trunk of the tree usually runs up twenty and thirty feet without limbs, then branches out in all directions, forming a well-proportioned beautiful tree, ever green and ever ornamental. The leaf is small, elliptical in shape, slightly serrated, and of a vivid dark green colour all the year round, except for a week or two in early spring, when the young leaves are of a delicate tender green. The seed or berry grows in clusters, and resembles black currants in size and appearance. The wood is used for many purposes, its fine grain rendering it especially valuable for cabinet work, while it is used also for ship-building. The roots make excellent knees for ships. I have sent many seeds of the camphor tree to the United States, in the hope of adding to our own arboriculture. In the manufacture of camphor the tree is necessarily destroyed, but, by a stringent law of the land, another is planted in its stead. The simple method of manufacture employed by the natives is as follows:—The tree is felled to the earth, and cut into small pieces, or, more properly speaking, into chips. A large metal pot is partly filled with water, and placed over a slow fire. A wooden tub is fitted to the top of the pot, and the chips of camphor wood are placed in this. The bottom of the tub is perforated, so as to permit the steam to pass up among the chips. A steam-tight cover is fitted on the tub. From this tub a bamboo pipe leads to another tub, through which the enclosed steam, the generated camphor, and oil flow. This second tub is connected in like manner with a third. The third tub is divided into two compartments, one above the other, the dividing floor being perforated with small holes to allow the water and oil to pass to the lower compartment. The upper compartment is supplied with a layer of straw, which catches and holds the camphor in crystal in deposit as it passes to the cooling process. The camphor is separated from the straw, packed in wooden tubs of 133⅓ lbs. each, and is ready for market. After each boiling the water runs off through a faucet, leaving the oil, which is used by the natives for illuminating and other purposes.'

The London Medical Record.

Article 2141.

SENATOR ON SELF-INFECTION BY THE PRODUCTS OF ABNORMAL PROCESSES OF DECOMPOSITION WITHIN THE BODY, AND THE RESULTING (DYSCRASIC) COMA (KUSSMAUL'S 'DIABETIC COMA').

Senator (*Zeitschr. für Klin. Med.*, Band vii., Heft 3) says that dyscrasiæ are pathological states in which the blood or fluids of the body have undergone some qualitative or quantitative change, providing that this be not the result of some organised or unorganised poison introduced from without, in which case we speak of it as infection or intoxication.

These dyscrasiæ have long been recognised as the result of the retention of some normal excretion; and the history of medicine shows the importance formerly attached to such doctrines, all sorts of diseases being attributed to the suppression of perspiration, menstruation, lactation, and even the sperma virile, which was said to cause cachexia spermatica or seminalis.

The morbid influences of the retention of bile, urine, and carbonic acid gas are too well known to need dwelling upon; but in recent times the suggestion has been made that the body itself, or a particular organ, may become the source of a form of dyscrasia due to abnormal decomposition, which may be called autochthonous or autogenetic dyscrasia.

In former times, such doctrines were current in the guise of speculations about putrefaction or fermentation of the blood, lymph, &c.; but it is only recently that they have received any support from facts. When it was shown that septicæmia might result from collections of pus or putrefying fluids in the body, and it was established that this putrefaction might occur independently of external agencies, this doctrine of autochthonous dyscrasia was placed beyond doubt. But pyæmia and septicæmia are not quite what we ordinarily mean by dyscrasia, this term being generally restricted to chronic diseases; but the statement originally made by Petters in 1857, and confirmed by Kaulich, Betz, and Cantani, that acetone is developed in the blood and fluids in diabetes and other diseases, has been in recent times fully established; and, as is generally known, a particular group of nervous phenomena, 'diabetic coma,' has been ascribed to the presence of acetone or allied substances in the blood.

In 1868, Senator described a case of sulphuretted hydrogen poisoning resulting from an error of diet, and pointed out that the digestive organs are the origin of nearly all acute and chronic dyscrasiæ, and that self-infection may occur, and is followed by a series of nervous disturbances. Even during the normal digestive processes, putrefactive products of a poisonous nature—phenol, indol, and the aromatic series—are developed, and Brieger has lately obtained a poisonous alkaloid from peptone; while in abnormal digestion there are such products as butyric acid, sulphuretted hydrogen, marsh-gas, &c. All these substances have a more or less poisonous influence on men and animals, causing (in large doses) convulsions, paralysis, coma, and death; in small doses, dulness, vertigo, dimness of sight, tinnitus, &c. While the nervous system suffers most evidently, it is not alone affected; the kidneys being also frequently involved. Most of these substances are secreted by the kidneys, and irritate them. Changes in the digestive system have a direct influence in causing renal disease; and a certain chronic affection with albuminuria, still ordinarily regarded as a local disease, in Senator's opinion originates in the digestive system, and is of an autochthonous dycrasic nature. [The author is apparently alluding to the chronic insidious form of granular kidney.—*Rep.*]

In diabetes the dyscrasia is undoubted, and is generally regarded as the cause of all the phenomena except the excretion of sugar. This last is probably due to some alteration of the digestive functions in the stomach, intestines, or liver; so that we may call diabetes an autochthonous entero-hepatogenous dyscrasia.

The uric acid diathesis, and gout, rickets, and many other conditions not so well defined, as, for example, oxaluria, also belong to this class.

But, besides the digestive organs, this self-infection may depend upon processes occurring in any of the normal or pathological cavities of the body; not only abscess-cavities, lung-cavities, and purulent collections in the thorax and abdomen, but especially the urinary bladder and passages.

In chronic cystitis with ammoniacal decomposition of the urine, there gradually supervene dulness, depression, digestive disarrangements, 'urinous' smell of the breath and sweat, drowsiness, and coma. These phenomena have been attributed to the absorption of ammonia, and this 'ammoniæmia' has been more or less identified with 'uræmia.' This is not the place to discuss the identity of ammoniæmia and uræmia. Ammonia is probably not the only or even the principal cause of this dyscrasia, though it is the body which by its smell makes its presence most noticeable, and doubtless has its origin in the decomposition of urea. But the decomposition of urea gives rise to various other products, such as the sulphur-compounds, the ferments, &c., and in those cases where pus and mucus are undergoing decomposition, other putrefactive products are present in considerable quantities. The eminently poisonous nature of decomposed pus is well known, and is attributed to the presence of certain unstable fatty acids, *e.g.* butyric. Trimethylamine must also be mentioned as a product of the decomposition of purulent urine in the bladder, for the production of which the lecithin of the pus affords abundant material.

Finally, it seems not impossible that such decompositions may take place not only in the natural and pathological cavities of the bodies, but in the parenchyma and in the fluids of the tissues, even as primary conditions; that they can do so in consequence of infection from other parts, is no longer doubtful. But there are grounds for believing that imperfect oxidation causes decomposition in the tissues. Hoppe-Seyler has said that insufficient introduction of oxygen, either from obstruction in the air-passages or from excessive demand for it through great muscular exercise, causes, generally in the liver, perhaps in other organs, changes similar to those of

phosphorus-poisoning, and in consequence an increased secretion of urea at the expense of the constituents of the organs. Leucin and tyrosin are found in the most different parts of the body where the blood-supply is insufficient; and in this manner, when the blood-supply is not altogether cut off, the decomposition-products of the part find their way into the circulation. The influence of imperfect blood-supply is seen in those cases of acute or subacute intoxication which occur in certain examples of pernicious anæmia.

The effects of these dyscrasiæ are mostly manifested by alterations in the functions of the nervous system—pains in the head, apathy, drowsiness, passing into coma, or restlessness and delirium, convulsions, vertigo, tinnitus, nausea, and vomiting. Kussmaul was the first to describe under the name 'Diabetic Coma' a peculiar mode of termination of diabetes, which he attributed to 'a chemical decomposition of the blood, an 'intoxication' which depended upon 'chemical destruction of the economy in diabetes.'

From the acetone-like odour of the breath, it seemed as if acetone was the toxic agent; but he pointed out how the cases differed from the acetonæmia described by Kaulich and Petters; and in experiments on animals he failed to produce, by acetone poisoning, symptoms very similar to those he had observed. Frerichs came to the same conclusion, and had no better results with ethyl diacetic acid; and hitherto all attempts have failed to determine the exact substances to which this intoxication is due. But Kussmaul's statements were amply confirmed, as such cases are by no means rare, especially in young subjects. It has been wrongly supposed that Kussmaul's description applies only to diabetes, and is always associated with urine giving a red reaction with ferric chloride. Both these positions are untenable, as the condition may be seen in other diseases than diabetes and apart from that reaction of the urine. Moreover, *coma* is not the most characteristic feature of Kussmaul's group of symptoms. It is the striking *dyspnœa with free respiratory movements and unobstructed air-passages*, and generally hurried respiration. Next to this, the most characteristic thing is the rapid pulse; then the excitement with groaning or sighing, jactitation, severe pains, and lastly coma. The temperature of the body is not notably increased, and in some cases has been below normal. No case of terminal coma, in which the peculiar breathing is not present, can be said to belong to this class.

This termination presented itself in the two following cases of chronic cystitis.

Case 1.—T. H., aged 65, was admitted into hospital with atony of the bladder, in which catheterisation was needed; he had great emaciation, an urinous odour, hard radial pulse, dry tongue, and bronchial catarrh. The bladder was catheterised; the urine being bloody, the bladder was washed out with solution of salicylic acid, afterwards with 20 drops of liquor ferri to half a litre of water. Towards evening of the day after admission he became restless, and groaned; pulse, 116; temperature, 39°·1 C. (102°·3 F.). The next morning he was somnolent, with deeper and quicker (24) respiration, and at the right base there were dulness, bronchial breathing, and some râles. He sank into coma, and died the next day. At the necropsy there were found moderate bronchitis, hypostatic pneumonia of the lower third of the lower lobe of the right lung, slight pericarditis, a thickened bladder, with swollen livid mucous membrane, and a diphtheritic ulcer in it.

This case is imperfectly recorded, but the peculiar breathing was quite marked, and could not be ascribed to either the pneumonia, the bronchitis, or the pericarditis.

Case 2.—T., aged 51, suffered from gonorrhœa and pain in passing urine. He had suffered from pains in his legs, had not had syphilis, had lately suffered from vomiting and headache, and the bladder pains had become worse. For some months past those about him had noticed a smell in his breath like 'herring pickle and urine.' At one time he worked in white lead. The heart was enlarged; there was a systolic apex-murmur; the urine was acid, pale, and deposited pus; it contained no bacteria nor triple phosphates. The next day the peculiar smell of the breath was very marked, and a rod dipped in hydrochloric acid gave off white fumes when held near his mouth. Eleven days after admission the patient was restless at night, groaned, tossed about, and was not quieted by an injection of morphia. In the morning, he was breathing deeply and with groaning respiration. By noon the respirations were 20 to 24, deep and noisy. No cause for the dyspnœa could be found in the lungs. The night was very restless, in spite of morphia. The peculiar breathing continued. On the following day he was comatose; the pupils were contracted, and not reacting. The urine, drawn off with a catheter, smelt of sulphuretted hydrogen. At midday the respirations were eighteen to twenty, very deep and sighing; pulse, 98; deep coma. He died early next morning. At the necropsy, the brain-membranes were moderately injected; the brain was pale, moist, shining; and the ventricle contained a moderate amount of fluid; there was no localised lesion. The cerebral arteries were very atheromatous. The heart was fatty; the left ventricle was dilated and hypertrophied; the valves were normal. The lungs showed injection of the lining of the air-passages. The spleen was a little enlarged, and tough. The kidneys were of normal size, with the capsules adherent in places, and thickened vessels. The bladder was contracted. On section, it emitted an odour of sulphuretted hydrogen; the lining membrane was thickened, injected, and studded with miliary nodules consisting of swollen follicles. The stomach smelt of trimethylamine. The blood, after standing, gave the spectrum of O-hæmoglobin. Under the microscope, the bladder-wall was seen to be infiltrated with round cells.

It may be said that this was a case of uræmia, because there was some disease of the kidneys. Such a mode of settling the matter would compel us to call all cases of coma in jaundice 'cholæmic coma;' all in leukhæmia, 'leukhæmic coma;' all in diabetes, 'diabetic coma,' without seeking to determine how far the original disease was the cause of the coma, and without taking into account the varying clinical features which the patients presented. No doubt there is no single symptom which is constant and characteristic, except the coma itself; but in the majority of cases the symptoms are grouped according to some type, as in uræmia, classically described, by Frerichs many years ago. If this type is not expressed, we cannot say that it is a case of uræmia, as a renal case may become comatose from other causes besides uræmia, as from alcohol. In the same way, in diabetes, all coma is not the typical

kind described by Kussmaul. Witness a case of diabetes reported by Frerichs in a patient with Bright's disease and suppurative nephritis, who died in coma, but not in the typical form of diabetic coma.

In the cases just related the type of coma corresponded to that of Kussmaul, not to uræmia. What was the toxic agent? The unmistakable smell of trimethylamine in the breath suggested this substance, which has been proved to have a poisonous effect on the nervous system, and, according to Gaehtgens, quickens the respiration. But trimethylamine, though probably one cause, was not the sole agent. Ammonia was present in the breath, and we are not in a position to say that this substance was not the cause, and perhaps the principal cause, of the intoxication. Moreover, in the formation of trimethylamine, which doubtless was formed from lecithin, neurin (cholin) would be produced, another very poisonous body, so that it is improbable that trimethylamine acted alone. It is probable that the trimethylamine was formed in the stomach, and only passed through its earlier stages in the bladder.

In the two following cases of gastric cancer, the termination was by Kussmaul's group of symptoms.

Case 3.—C. S., aged 43, a pale, emaciated man, had an epigastric tumour as large as a walnut; the urine contained much indican, otherwise it was normal; he had repeated vomiting, once of coffee-grounds-like matter. Two months after admission he complained of pains in his legs; the next evening his temperature went up, and the following night he had a rigor, and his temperature reached 39°·7 C. (103°·2 F.). After this his temperature fell, but he had two restless nights, and some 'dyspnœa' was noted. About noon on the sixth day since he complained of pains he became somnolent, but could answer questions, complained of want of air. The respiration was frequent (24) and very deep; pulse small, 100. There was nothing abnormal in the heart and lungs. The pupils were contracted, but reacted to light. The next day he was comatose. His urine gave no Fe_2Cl_6 reaction, contained no albumen or sugar, but much indican. He died the following morning. At the necropsy all the organs were found atrophied and anæmic. There was an extensive cancer of the smaller curvature of the stomach near the pylorus, with metastatic deposits in the liver.

Case 4.—N. L., aged 51, had suffered for a long time from obstinate constipation, with 'liver and stomach disorder.' He was extremely thin, very pale, rather yellowish, with slight œdema of the ankles, and swollen inguinal glands, very apathetic. He frequently vomited brown stuff containing chlorophyll-granules, round cells, epithelium, &c., no sarcinæ. The urine was clear; it contained no albumen, but a large amount of indican. Two days after admission he had a restless night, with sighing and moaning. Morphia and camphor were injected subcutaneously. The next night he slept little, complained of difficulty of breathing, and breathed very deeply, 20–22 per minute. At noon, he was quieter and drowsy. The urine gave no perchloride reaction, and was free from albumen and sugar. At night he was restless, and again had morphia and camphor subcutaneously. The next day he was cyanosed, with cold extremities and comatose. The pupils were contracted, respiration 20–22, rather deep. He died the next day. The temperature was throughout subnormal. The necropsy showed anæmia of the brain and its membranes, with fluid in the lateral ventricles, carcinoma of the stomach near the pylorus, but no definite stenosis, and secondary nodules in the liver and kidneys.

Both these cases might be ascribed to the products of abnormal digestive processes. Common as is cancer of the stomach, such cases are rare; but, since attention has been drawn to them, more will be published. Von Jaksch has just published a case of Kussmaul's coma in a case of cancer of the stomach with no sugar in the urine, but differing from the present case in the urine containing aceto-acetic acid and aceton. It is probable that one cause of the intoxication is to be found in the profound anæmia, which was present in both cases.

In the three following cases the influence of anæmia is well shown.

Case 5.—E. K., aged 30, maid-servant, had been ill six months. There was great pallor of the skin and mucous membranes, slight œdema of the feet, puffed face; hæmic murmurs were heard in the heart and veins; there was slight increase in the area of dulness of the liver and spleen. The urine contained no albumen nor sugar, but a large quantity of indican. The blood showed no increase of leucocytes, but the red corpuscles were pale and deformed. The spleen grew gradually larger, the urine became albuminous, the œdema increased, and ascites became evident. There were no retinal hæmorrhages. On April 10, in contrast to her habitual patient and quiet demeanour, she was restless; the next day she was quieter, drowsy, breathing deeply (24). She answered questions and complained of thirst; at night she was restless, but was quieted by a morphia injection. On April 12 the night was quiet, but the patient lay unconscious, breathing deeply and noisily, 22-26 per minute. The urine contained a trace of albumen, no sugar; it gave no ferric chloride reaction, no special odour. At the *post mortem* examination the organs were found to be very anæmic; there were ecchymoses on the mucous and serous surfaces. The heart and kidneys were fatty, the liver and spleen were enlarged from chronic congestion. There was no amyloid disease; the marrow of the ribs was very red.

Case 6.—J. K., aged 41, well developed and fairly well nourished, had extreme anæmia. A systolic apex-murmur was heard, and catarrhal sounds in the lungs. He had typhus (? typhoid) in boyhood; since then, he had enjoyed good health till eight months ago. He often had epistaxis. Temperature ranged between 37° and 39°·3 C. (98°·6 to 102°·7 F.). The urine was free from albumen and sugar. About a month after admission he complained of shortness of breath, but nothing could be detected in the lungs. He had a severe attack of epistaxis. Five days later, on Dec. 24, after another epistaxis, he was collapsed, nearly unconscious, and complained at times of want of air. Temperature, 37° Cent. The following night he was restless and delirious. In the morning he was drowsy; respirations, 32. Later in the day, the breathing was noted as deep and frequent (28 to 32). Temperature, 35° C. (95° F.). During the next twenty-four hours he lay comatose, pulse 108, respirations 24, deep. The pupils were contracted. The heart-sounds were reduplicated. There was some rhonchus over the lungs. The urine was passed involuntarily; it was free from sugar and albumen. Again, there was no reaction with ferric chloride. Blood from his finger showed pale and deformed red corpuscles, not forming

rouleaux; the leucocytes were, perhaps, relatively increased. In the evening he became cyanosed and died. Both pleural cavities contained fluid; the lungs were anæmic and œdematous. The heart was flabby, fatty; the valves were normal. The spleen was a little enlarged. The kidneys and liver were anæmic, pale, and fatty. The marrow of the sternum and right femur contained, besides red blood-corpuscles and the ordinary marrow-cells, numerous nucleated red blood-corpuscles, the nucleus being generally excentrically placed, and half as large as the cell.

Case 7.—M. L., aged 60, female, had great anæmia. There was a systolic apex-murmur, without obvious cardiac dilatation. The urine was pale, free from albumen and sugar; it contained a large amount of indican. While under observation, she passed through an attack of pneumonia affecting the right lung. A few weeks later she complained of epigastric pain, loss of appetite, with clean tongue and regular bowels. There was slight œdema of the feet. The weakness increased, so that she took to her bed. About a fortnight afterwards she became restless, sighed and groaned, and complained of want of air; after a morphia injection, she slept all night. In the day she was again restless, groaning and partially unconscious. In the two following days the coma increased, urine was passed in bed, respiration became frequent and deep, without any changes in the lungs. The urine, when examined, was free from albumen, and gave no ferric chloride reaction.

These three are all, out of at least a dozen cases of pernicious anæmia, seen since Kussmaul's observation was published, in which this termination has been noticed. W. Müller, in his monograph on pernicious anæmia, says, 'in other cases the respiration a few days before death or on the day of death may become very laborious, very frequent, with loud panting and wheezing, without there being any mechanical hindrance to the entrance of air;' and again he says, 'in the last days often supervene apathy, lethargic somnolence, absolute loss of reaction, delirium and getting out of bed, great restlessness, tossing about, &c.' Müller explains these symptoms as due to the diminished respiratory power of the blood. But probably, besides the impaired oxygen-carrying power of the blood, intoxication of some sort plays a part; for the most profound anæmia, after hæmorrhage for example, does not give rise to these symptoms, and in diabetes the anæmia is often not very marked. In acute alcoholic poisoning the same group of symptoms is sometimes seen, and was observed in the following case of atropine poisoning. Miss M. B., on June 5, took a large dose of atropine, exact quantity unknown, upon which followed malaise, coma, and convulsions. At twelve o'clock the patient was in deep coma, respiration 32, deep and blowing. The breath smelt sourish; the urine was clear, without albumen or sugar, but colouring deep red with ferric chloride. On the following day the urine contained much indican, gave a precipitate with acids which dissolved on heating. With ferric chloride, dark red coloration. She died on June 9. In the last two days the respiration was not so hurried.

In this case the relation is very remarkable between the state of the respiration and the urine, as in diabetes. The substance precipitated by acids and dissolved by heat was probably hemialbumose (propeptone).

It only remains to observe that Kussmaul's coma in all the foregoing cases was a sign of bad prognosis, even worse than in diabetes, in which, although rarely, recovery from this condition has taken place.

The following propositions result from the foregoing considerations.

1. Acute and chronic dyscrasiæ may occur, not only by the retention of normal excretions, but by the resorption of substances found in the body by abnormal metamorphosis, as well as by the introduction of abnormally large quantities of normal substances.

2. The principal source of such autochthonous dyscrasiæ lies in anomalies of the digestive apparatus; next, in diseases of the bladder and profound anæmia.

3. The results of such autochthonous dyscrasiæ manifest themselves principally in the nervous system and the kidneys.

4. Besides 'uræmia,' there are other acute nervous affections, of which that described by Kussmaul as 'diabetic coma' is very characteristic, and the causes of which are to be sought in various toxic influences.

5. Kussmaul's group of symptoms may be met with in other grave diseases, besides diabetes mellitus, such as pernicious anæmia, and is not dependent upon the occurrence of the falsely so-called 'acetone reaction' in the urine (red coloration with ferric chloride). ROBERT SAUNDBY, M.D.

ARTICLE 2142.

DELAFIELD ON TYPHOID FEVER IN NEW YORK CITY.

IN the *New York Medical Record* for November last, Dr. Delafield gives some interesting particulars of enteric fever as it is met with in the City of New York. The disease is endemic there, although it is more prevalent in some years than in others. According to the return of the Board of Health, the mortality from the year 1854 was as follows.

Year.	Deaths.	Year.	Deaths.	Year.	Deaths.
1854	136	1864	661	1874	275
1855	539	1865	513	1875	348
1856	133	1866	514	1876	283
1857	141	1867	345	1877	275
1858	176	1868	326	1828	245
1159	206	1869	378	1879	178
1860	212	1870	422	1880	241
1861	234	1871	239	1881	446
1862	404	1872	364	1882	362
1863	531	1873	295	1883 (to Oct. 1)	274

It will be seen from this table that the disease was most prevalent in the years 1863-64-65-66, the same years in which typhus was epidemic; and, whilst we do not deny that there may have been a real increase in the number of enteric fever cases in these years, we are inclined to think that the increase was more an increase of typhus than an increase of enteric fever. There is evidence in Dr. Delafield's paper that these fevers, as we meet with them in London, have been confounded, a point to which we shall return when we arrive at symptoms and *post mortem* appearances.

The cases occur in all the months of the year, but in the months of August, September, and October there is a large increase. The number of cases

reported by the Sanitary Bureau from 1878 to Sept. 1883 were as follows.

	1878.	1879.	1880.	1881.	1882.	1883.	Total.
January	43	37	22	42	46	47	237
February	27	21	31	23	30	25	157
March	16	19	33	58	25	48	199
April	29	21	21	52	22	26	201
May	24	23	37	50	25	29	188
June	25	27	22	31	21	28	153
July	36	24	39	63	40	93	294
August	98	53	46	115	96	244	652
September	89	74	63	132	117	356	833
October	105	62	64	138	147	—	—
November	62	34	73	129	68	—	—
December	44	37	57	104	50	—	—
Total	598	432	508	965	686	—	—

Besides these there were others which, Dr. Delafield says, *occurred* in the City hospitals from 1877 to Oct. 1883. We presume that 'occurred in' is a misprint for 'were admitted into.' They are as follows.

Hospitals.	1877.		1878.		1879.		1880.		1881.		1882.		1883 to Oct. 1.		Mortality per cent.
	Cases.	Deaths.	Cases.	Deat hs.	Cases.	Dea hs.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
Riverside	8	4	20	8	12	4	9	1	62	6	11	1	13	4	20·7
Bellevue	49	17	31	11	11	4	22	13	52	16	105	28	41	15	32·4
Roosevelt	16	4	11	3	13	1	14	0	27	11	54	17	12	8	36·8
New York	12	2	7	2	12	2	19	7	27	5	11	3	19	2	21·4
St. Luke's	5	1	8	2	7	2	8	3	19	3	29	9	9	2	25·8
St. Vincent's	14	1	8	2	6	0	9	4	23	6	14	2	17	8	25.9
St. Francis	20	7	24	4	17	2	18	6	56	17	71	11	57	9	21·3
Mt. Sinai	11	1	15	3	36	8	11	2	56	9	18	4	22	3	17·1
Total	135	37	124	34	114	23	110	33	319	73	313	75	190	51	
Percentage of mortality	27·4		27·4		20·1		30·0		22·7		23·9		26·8		

As regards age, Dr. Delafield says that as children are 'admitted only in small numbers, the hospital statistics are not quite accurate on this point; but, allowing for this circumstance, the relative frequency of the disease at different ages has been as follows.'

5 to 10	49	40 to 50	77
10 to 20	356	50 to 60	16
20 to 30	604	60 to 70	8
30 to 40	186	70 to	8

It will be seen from this that out of a total of 1,280 cases 385 were under twenty years of age, and 940 were under thirty.

The interest of this point is etiological, and has reference to the often asked question why, if enteric fever be contagious, do nurses in hospital so rarely contract it? Probably because they have already had it, or because they are insusceptible of it if there be any such. We are disposed to doubt if there be any persons insusceptible of these fevers when fairly exposed to their causes. There are a considerable number of persons who take them so lightly that the fact escapes observation. This is occasionally true even of small-pox, and, as regards scarlet fever, typhus fever, and enteric fever, it is, the reporter thinks, true very often. It has happened to him in four instances to discover scarlet fever by a pure accident. The subjects were nurses in scarlet fever wards at Homerton, and they had each passed through an attack of scarlet fever, so slight that it neither interfered with the daily performance of their work, nor attracted the attention of the medical officer whom they accompanied daily through the ward. The means by which two of these cases was discovered are from an etiological point of view of great interest. The one went to a Christmas party, at which she fainted whilst dancing. She was taken to her room, when some inquiries as to her previous health led to an examination. She was found to be desquamating abundantly, and to have had clear symptoms of an attack of scarlet fever. This is what probably explains many an obscure outbreak of infectious disease—the presence of a person or persons actually sick of it, but so mildly sick of it that either they do not notice it at all, or, if they do, think it is only a little cold. These little colds explain a great deal. The other of the two was on the point of emigrating to Australia, and she came to the reporter to ask him to sign a medical certificate. A strong healthy girl to all appearance, it seemed ridiculous to think even of examining her. Examination, however, showed abundant desquamation on the chest and legs. She gave a history of scarlet fever, which, however, had been so slight that she did not recognise the nature of her illness.. One can imagine the surmises which would have been made if this girl had gone in an emigrant ship to Australia, and about a month afterwards, having wrapped somebody's baby in her flannel petticoat, an outbreak of scarlet fever had occurred. Now, had any one of these women been asked if they had had scarlet fever their answer would have been, but for the accidents mentioned, no! although they had nursed in the Homerton Fever Hospital for months. If this be true of a disease like scarlet fever, where the symptoms even in slight cases are external and readily recognisable, how much more likely is it to be true of a disease like enteric fever, where the symptoms are in mild cases internal and invisible?

[It is very probable that a large number of persons, including, of course, nurses, pass through attacks of enteric fever without even suspecting it. Such persons say honestly, when asked, that they have never had enteric fever, although they have nursed it or have been otherwise exposed to it. Hence the difficulty of tracing epidemics to their origin; the very persons who have been the first sufferers in an epidemic not even knowing that they were sufferers. A case occurs to the reporter in which the diagnosis of this fever was made by an accident. A., complaining of some symptoms which appeared to be dyspeptic, was ordered to the seaside. There for the first day or so A. improved, but on the third day became delirious, and had to be brought back to London. There A. was nursed by B. A. died, and the cause of death was certified

by a graduate of an English University to be—anæmia, three months' duration; mania, one week's duration; and exhaustion. B. contracted an illness very like A.'s, and found his way into a hospital. The diagnosis of B.'s illness at the hospital was enteric fever, and upon inquiry it was found that A.'s case was one of a well-known epidemic. It would be easy to enlarge upon this, the large amount of error there is abroad in the diagnosis of enteric fever; and the present paper supplies evidence of it, as we shall see further on.]

But to return. On the etiology of the disease Dr. Delafield has nothing to say. New York City, it appears, like cities generally, 'is not a favourable field for studying the etiology of the disease. The entire city has the same water-supply, and a large part of it the same system of sewerage. A considerable number of the cases originate outside the city.'

To illustrate the character of the symptoms, Dr. Delafield chose 102 well-marked cases which occurred in the last five years. In eighteen of them there were premonitory symptoms, consisting of headache, languor, indisposition to bodily or mental exertion, loss of appetite, constipation or diarrhœa, and sometimes bronchitis. The duration of this period varied from four days to five weeks. The mode of invasion varied. In twenty-five cases the first symptom was diarrhœa, in thirty-seven a chill, in fifteen headache, and 'in six cases a marked bronchitis, with cough, expectoration, and physical signs, was the most prominent feature.' The duration of the cases varied. In some, convalescence began in the third week; in others, in the fourth; whilst in a third set it did not occur until the fifth, sixth, seventh, and eighth weeks; and 'when there were relapses, the disease might be still further prolonged. The height of the temperature was usually in proportion to the disease, but to this rule there were many exceptions; mild cases with high temperatures, and severe cases with low temperatures. There was also a good deal of difference in the cases as to their ability to bear the temperature. Some patients would be much more affected by a temperature of 102° than others by a temperature of 105°.'

[This is in entire accordance with our experience, and it has an important bearing on the treatment known as the 'cold water treatment.' According to the supporters of this treatment, it is apparently assumed that the only factor to be reckoned with in the disease enteric fever is the heat. The body is too hot. All the mischief arises from that. Let the heat be abstracted, and all will be well. The question ceases to be a complex question of biology, and becomes one of pure physics. Clinical experience contradicts this simple view. All the mischief does not arise from the heat. In addition to the heat, there is the individual who is affected by it, and in this respect individuals vary. One patient is restless and sleepless, with a dry tongue, and a temperature ranging between 102° and 103°, whereas another, with a higher temperature, is so slightly affected that, but for the thermometer, one would hardly know that he was ill. Take the following as an example. E. Searle, aged 23, was nurse of an enteric fever ward in the North-Western District Hospital from Nov. 17, 1882, to July 1, 1883, and from Sept. 10 to Oct. 12 last, when she complained of sore throat. From this time to the 18th she was off duty with what appeared to be an ulcerated throat. On the 19th she had so far recovered that she returned to duty, but she did not regain her appetite, and felt occasionally faint, dull, and out of spirits. In this condition she continued until November 9, when she found that she could not make her beds, had some pain in the back and stomach, aggravated by food and a troublesome cough. On the 15th she felt as if she had a severe cold, and looked dull and stupid. The case was complicated by a monthly period, which happened on the 6th; her periods were usually accompanied by pain in the stomach and back. This ceased on the 7th, and to this the patient attributed her illness. The pain in the stomach and back, however, continued. On the evening of the 16th the temperature was 102° F. On the 17th she tried to, but could not, make her beds, and on the evening of this day she took to bed. On the sixteenth day of the disease the temperature reached 106°·5 F., an alarming condition of things to most people in enteric fever; but in this case the patient was as comfortable as if there had been nothing the matter with her. This discord between patient and temperature raised doubts as to the enteric fever, doubts as to the competence of the nurse who took the temperature, and doubts as to the accuracy of the thermometer. As regards the first, the patient was nursing enteric fever at the time. She had, as far as she knew, never had the disease, and was therefore, if she had not, susceptible. She became sick along with two others, one of whom was the night-nurse of the enteric ward of which Searle was the day-nurse, and the other a housemaid who frequented an enteric ward at a time when the wards were full of acute cases, to the number of fifteen in each. There was the slow hesitating mode of commencement by sore-throat, as if it were the intention of the disease to throw one off the scent, as no doubt sometimes it has done—such cases having been mistaken for scarlet fever or diphtheria—the three weeks' fever, the constipation, the eruption, and the slow recovery, all which point to enteric fever. It was certainly not any other specific fever, and there were no local disturbances to account for a non-specific fever. There was the monthly period truly, but this ceased on Nov. 7, and her illness continued. On the whole, the probability is that it was a case of enteric fever. It is difficult, if it were not, to see what else it was. The second and third doubts were determined by testing the thermometer and rectifying the observation by taking it a second time. A consideration of temperatures in this case will also show how erroneous must be the conclusions drawn from single observations at some particular morning or evening hour. Thus, at 2 A.M. of the tenth day of the disease the temperature was normal; at 4 P.M. of the same day it was 104° F.; at 8 P.M. it was 100°·5 and at midnight over 104°. At 2 A.M. of the eleventh day of the disease, the temperature was slightly above normal, whereas between 2 and 6 P.M. it was about 105°. Now, supposing that in this case the temperature had been taken at 10 A.M. and 10 P.M., morning and evening hours, the gravity of the case as indicated by temperature (if gravity of case be indicated accurately by temperature) would have been missed. Even if the observer had chanced to make his observations at 8 A.M. and 6 P.M., whilst he would have hit upon the highest temperature of the twenty-four hours, the all-important fact that this high temperature was continuous from 2 to 6 P.M. would have been missed. Now, supposing it were the

habit of the observer to judge of the gravity of a case by the temperature, in this case he would have underestimated it. On the thirteenth day of the disease the temperature from 10 A.M. to 2 P.M. was about 104°, whereas in the evening hours, from five to nine (between which hours it is very common to make the evening observations), it was below normal ; but at 10 P.M. was nearly 104°. Take now the fourteenth day. At 10 A.M. of this day the temperature was 104° ; at noon it was normal, and one hour after it was again 104°. It will be obvious how erroneous would be conclusions drawn in cases of this sort from observations limited to some morning and evening hour. That the disease has its rise and its fall is true, but these do not correspond to the evening and the morning of the English civil day. It would have been just as reasonable to make the enteric fever day correspond with the astronomical day, or with some other civil day, say the Greek, which commences at sunrise, or the Italian, which commences at sunset. All these are artificial divisions for which enteric fever has no respect whatever. The temperature, to be of real value, should in severe cases be taken hourly, unless the patient be asleep. For the most important point is not the actual height which has been reached on a given day, but the duration of the height. The accident of a visit from a friend, or some other trifling circumstance, will raise the temperature for a short time two, three, or more, degrees. It is further of great importance where nurses or relatives, who may be ignorant or untrustworthy, must be left to take temperatures, that the physician should compare the general condition of the patient with the temperature, so as to see whether the temperature and the patient agree, or whether they differ. Nurses have been found to evolve the temperatures out of their consciousness, to save themselves the trouble of taking them. The patient should, therefore, be carefully examined in order to ascertain if the thermometer be a true witness. It will be found sometimes that the patient is better than his temperature, at other times that he is worse. In other words, it will be found sometimes that patients with high temperatures are doing well, whilst others with low temperatures are doing badly, as Dr. Delafield says, and we entirely agree with him : 'Some patients would be much more affected by a temperature of 102° than others by a temperature of 105°.' In some cases it is the low temperature which indicates danger, not the high. We do not mean cases in which the low temperature is due to hæmorrhage, but cases towards the latter part of the disease where there is continued restlessness and sleeplessness with a temperature about 102°. Such cases are for the most part fatal. In a word, the value of the thermometer is relative, not absolute. It teaches nothing *in itself*, except caution in too readily believing it. The temperatures, moreover, even to be of this value, must, as far as possible, be the temperatures of the whole day of twenty-four hours—not that of one or two morning and evening hours, hours which vary with the habits of every physician. The morning hour of the man who breakfasts at 5 A.M. is likely to be very different from the morning hour of the man who breakfasts at 11.]

The pulse, according to Dr. Delafield, 'mostly followed the course of the temperature,' but to this there were exceptions. In some cases he found that the fever ran its entire course with a pulse of from 60 to 80. [In Searle's case on the sixteenth day of the disease the pulse was 65, although the temperature from 6 in the morning up to 6 in the evening ranged from 103° to 106°·4.]

The appearance of the patients is said to have been characteristic. 'A dull, apathetic expression, the skin of the face dusky coloured, the mind dull and sluggish'—a description of typhus fever as it is met with in the London fever hospitals, rather than of enteric fever. This at once suggests that there has been some confusion of typhus with enteric fever in New York. This view is strongly supported by the further statement, '*complete unconsciousness* was usually a fatal symptom, although apathy verging on stupor was seen in many of the cases which recovered.' Now of typhus fever, as we have seen it in London during eighteen years, this statement is perfect, but, as a general statement, it is inapplicable to enteric. This view will be rendered more probable by a consideration of one of Dr. Delafield's cases.

Case 1.—A male, aged 24 ; on Aug. 18 and 19 had diarrhœa, but did not feel ill. On Aug. 21 he was seized, after dinner, with an attack of vertigo and partial unconsciousness. Similar attacks had been repeated and had been accompanied by constant headache, pain in the back, and a general tired, weak feeling. He was admitted to the hospital on Aug. 25. He then had the appearance of a patient suffering from typhoid fever ; high temperature, tongue brown and dry, face flushed, mind dull. On Aug. 29, the eruption appeared on the abdomen and chest. On Aug. 31, he passed blood and mucus from the bowels ; before this there was no diarrhœa. On Sept. 1 he was a little delirious at night. On Sept. 4 he felt so well that he wished to sit up. On Sept. 5 he became delirious, his pulse was rapid and feeble, his tongue again became brown and dry, and on Sept. 6 he died.

[This case is badly reported, but, on the whole, it is more like typhus than enteric fever, which it certainly was not, as the *post mortem* examination showed. The sudden invasion suggests something different from enteric fever, which is so insidious that few patients can say when their illness really began. The dull apathetic expression, the dusky face, the sluggish mind agree better with typhus. In this fever the patient is a dull, heavy, dirty-faced, stupid patient. The enteric is a clean-faced, bright-eyed, intelligent patient. We are, of course, speaking comparatively and relatively. The dry, brown tongue may do for anything severely acute, but one thinks of it as characteristic of typhus rather than of enteric. On the 29th, the ninth day of the disease, 'the eruption appeared on the abdomen and chest.' This of course might be the one eruption or the other ; but a well-marked eruption, as this evidently was, is rather early for enteric, but it would suit typhus exactly.] Death occurred on the seventeenth day. Of the *post mortem* examination Dr. Delafield says : 'In the intestine only four of the agminated glands were found swollen, but not ulcerated. The mesenteric glands were swollen. In the left ventricle of the heart was an old *ante mortem* clot, the size of a chestnut. In the enlarged spleen were three infarctions. This was a case in which, from the clinical history, one would have expected to find the intestinal lesions developed in proportion to the severity of the constitutional symptoms.'

On the whole, we may say of this case that there is not sufficient evidence to show what it was.

What is certain is that it was not enteric fever, from the English point of view, because from this point of view the only *certain* evidence that a person has had enteric fever is the condition of the bowel.

The treatment in New York city, as elsewhere, varies. It need not detain us. The main point to be noted is that a certain number die, and that a certain number recover; the proportion of the one to the other depending mainly on the nature of the cases, and not on any superiority of one treatment over another.

> Nec calidæ citius decedunt corpore febres
> Textilibus si in picturis ostroque rubenti
> Jacteris, quam si in plebeiâ veste cubandum est.

In the New York Hospital milk-diet, with a little whisky, is the usual treatment. Occasionally the fluid extract of eucalyptus is given, for what purpose probably nobody knows. The mortality at this hospital is 21 per cent. At St. Luke's, the general treatment is much the same, except that the drug varies. Here quinine is used to reduce the temperature, which it does. Whether it benefit the patient is another question. The mortality here is 25 per cent. At St. Francis' Hospital, if the cases be seen early, large doses of calomel are given, 'with the idea of aborting the disease,' an exceedingly hopeless sort of idea we should think. At St. Vincent's Hospital quinine is given in doses of two grains hourly to control the temperature. Opium is given in diarrhœa and hæmorrhage. The mortality is 25 per cent. At Mount Sinai Hospital quinine in large doses is given to nearly all the patients. The mortality is 17 per cent. At Bellevue Hospital the treatment varies. In one division peptonised milk is used, and quinine in large doses when the temperature reaches 103° Opium, the bromides, and cold to the head, are used for restlessness. In another, quinine in moderate doses is generally given. For temperatures over 103°, sponging with cold water, or the Kibbee cot. In a third division a mixture of one drop of carbolic acid, and two drops of tincture of iodine, is given early in the fever every two hours. [For what purpose this is given, unless to destroy any little taste and appetite for food which the patient may retain, it is impossible to imagine.] The mortality here is 32 per cent. At the Roosevelt Hospital, full bathing has been tried, 'but now cold sponging is more used.' The mortality at this hospital is 36 per cent. 'In all the hospitals milk, either simple or peptonised, is the regular diet of the patients.'

One of Dr. Delafield's cases forcibly illustrates the mischievous effects of constipation. The question of how the bowels should be dealt with is so important, that we give this case in full.

Case 4.—A man, aged 45; said that he had not been feeling well for several weeks. On November 25 he felt worse, but went on a journey and returned on November 28. On November 29, in the evening, he had a severe chill, and remained in bed the next day. His bowels had been constipated, and on this day were acted on by medicine. On November 30 his temperature was taken for the first time, and found to be 105°. From this time till December 5 the patient was in bed, with a temperature of from 101° to 102°. His tongue was clean and moist, his mind clear, his bowels constipated; no eruptions, but several attacks of nose-bleed. On December 5 he began to cough and expectorate muco-purulent matter. On December 8 there were dulness on percussion and loss of breathing over the lower part of both lungs. On December 9, pulse 114 to 140; temperature, 103° to 99⅘°; respiration, 34 to 40. On December 10, pulse, 114; temperature, 102°. On December 11, pulse, 114 to 120°; temperature, 102⅖° to 102°. The patient now began to look worse, although his tongue was still clean and his mind clear. The constipation had continued, and now tympanites was developed. December 12, pulse, 120; temperature, 102° to 101⅘°. December 13, pulse, 120 to 128; temperature, 100⅗°. December 14, pulse, 120 to 128; temperature, 100° to 101°. The tympanites continued, became worse, and distressed the patient extremely. The bowels only moved with medicine. The patient died with feeble heart on December 15.'

[It is not surprising that this patient, the condition of whose lungs made his breathing difficult, was greatly distressed by the additional difficulty produced by the tympanites. It is just conceivable that the tympanites in this case was the incident which turned the scale, and that, had a few castor-oil and warm water enemata been administered, the result might have been different. The general practice at Homerton is to keep the bowels open, and we rarely meet with tympanites, and almost never with troublesome tympanites.]

The *post mortem* appearances met with in Dr. Delafield's cases, excepting the cases which in our opinion were probably typhus, are the *post mortem* appearances met with in cases of enteric fever in London. ALEX. COLLIE, M.D.

ARTICLE 2143.

BROUARDEL ON CAUSES OF ERROR IN THE INVESTIGATION OF CASES OF CRIMINAL ASSAULT.

IN a long paper read before the *Société de Méd. Légale*, and published in the *Annales d'Hygiène, Pub. et de Méd. Légale*, Nos. 7 and 8, 1883, M. Brouardel deals exhaustively with a variety of points connected with this difficult subject. The following is a brief outline of the questions touched upon.

Suppose, in the first place, that a mother discovers what she considers to be suspicious signs in her child, she questions and suggests until the outline of a story is furnished to the child, who then readily fills it in, and thus an air of probability is given to the whole. The child now finds herself a subject of interest and compassion, and, with the love of notoriety so dear to childhood, she sticks to her story at all risks. The two prime causes of error on the part of the doctor are, first, the anxious state of the mother, who is convinced that her child has been assaulted; and second, the falsehoods of the child herself, who has forged a story of which the main points have been suggested to her. In such cases a medical man ought to use his eyes and not his ears, and he ought to be very careful to state in his certificate only what he has himself seen.

Examination of the Hymen.—In considering this part of his subject, M. Brouardel has in view more particularly children under ten years of age—the period during which the difficulties are greatest. In the first place, a medical man ought only to certify as to the state of the hymen when he possesses real experience *de visu*. In illustration of this, a case is related in which a young French practitioner certified that the hymen of a child had completely disap-

peared, whereas, on a second examination in conjunction with M. Brouardel, the membrane was found to be intact. The practitioner's excuse to the judge was that he had never before seen a hymen, and that if he sought information on young girls he would himself be committing an illegal offence. From this M. Brouardel draws the wise conclusion, 'Never certify to anything about which you are not sure.' The hymen varies in position according to the age and *embonpoint* of the child. In well-nourished children under two or three years old the hymen is deeply placed, owing to the deposit of fat in the labia majora, which sometimes forms a layer several centimètres in thickness. In such cases, considerable perseverance and gentleness in the examination are necessary for the hymen to be seen at all; and these are the cases in which medical men sometimes certify that the hymen has disappeared. On the other hand, in thin ill-nourished children, the labia majora hardly exist, and the hymen is easily seen at a depth of hardly a centimètre from the surface. The form of the hymen is very variable at different ages. In newly born infants it is nearly always labial in form; but there are numerous variations. For example, there may be two or more folds in the segments of the membrane, in which case the orifice is of course proportionally dilatable, and in such cases absence of rupture, in girls from 12 to 15 years old, would not prove that coitus had not been completed. Such natural reduplications or folds in the hymen are often mistaken for old tears. The hymen appears only to become crescentic at 5 or 6 years of age, and this appearance is probably due simply to a further development of the preceding (labial) form. When it is well-marked and the orifice is narrow, there can be no mistake; but sometimes the branches of the crescent undergo partial arrest of development, giving rise to a notched appearance of the margin. The integrity of the free border on careful examination shows to the experienced eye the distinction between such natural notches and the effects of injury to the hymen. In a third form of hymen there are two symmetrical orifices, one on each side of a median bridle, which stretches across from the anterior to the posterior wall of the vagina. Most frequently the middle of the bridle is found to have disappeared, and only one or two projections or '*languettes*' remain, separated from the rest of the hymen by two deep notches. Two other causes of error are also mentioned. In one case, a chancre had eroded the edges of a torn hymen, which afterwards partially united, leaving two openings. In another case, a medical man found a hymen torn four days after violation. A second medical man, who saw the patient eleven days later, said the hymen was entire; the reason being that the two edges of the wound had united by that time, and the cicatrix, being then red, had escaped notice; for at another examination by both medical men together, thirty-five days after violation, the cicatrix had become white and clearly distinguishable. In examining the hymen, it must be remembered that, if the thighs be widely separated, the membrane is put on the stretch. It is sometimes necessary to make the child cough or bear down in order to obtain a satisfactory view of the parts, and the utmost gentleness must always be used. To make sure that the hymen is intact, the finger or a blunt probe should be passed behind it to smooth out the margin. It is only in this way that the difference between natural folds and cicatrices can be properly made out.

Vulvitis.—Inflammation of the vulva may be spontaneous, traumatic, or gonorrhœal. There are no absolutely certain means of diagnosing one from another. Urethritis, especially if of long duration, is a valuable indication of contagion, but it is not conclusive; for Caspar and Liman, as well as the author, have seen urethritis follow injury. In such cases, however, the urethritis will generally have subsided by the time the more acute stage of a spontaneous or traumatic vulvitis has been reached. Gonorrhœal urethritis, as a rule, lasts much longer. The most valuable signs are the course and duration of the vulvitis. The traumatic variety reaches its maximum of intensity in from thirteen to fifteen days, and disappears in a fortnight or three weeks in healthy children. In M. Brouardel's opinion, gonorrhœal vulvitis lasts much longer, especially in neglected children. Spontaneous vulvitis is very common in children of lymphatic temperament, particularly during teething and at the beginning of menstruation. It may be acute or chronic, and is contagious and epidemic, especially in hospitals. Swelling of the inguinal and vulvo-vaginal glands is most frequent with gonorrhœal vulvitis, but may occur in the other forms. When consulted in medico-legal cases of this kind, medical men are generally in too great a hurry to give a decided opinion, from fear of being thought ignorant or inexperienced. A decided opinion should never be given from a single examination. In most cases the diagnosis can only be made after several visits, and by following carefully the course of the malady; *e.g.* severe bruising of the parts may only appear several days after the violence which gave rise to it, and the first examination may have been made too early for the appearance of ecchymoses, of gonorrhœa, or of venereal sores.

In illustration of the occasional grave complications of gonorrhœa in girls, a fatal case (in a patient aged 15) is related, in which embolism of the pulmonary artery followed thrombosis of the left iliac vein in connection with purulent vaginitis and metritis.

Ulcers of the Vulva.—These may be 1, indurated primary sores; 2, soft sores; 3, mucous patches; 4, herpetic; 5, superficial ulcerations from intense spontaneous, traumatic, or gonorrhœal vulvitis. In considering these various lesions, M. Brouardel quotes largely from Fournier's lectures on *Syphilis chez la Femme*, especially in regard to the occasional difficulty in diagnosis between herpes and chancres. He also quotes from Parrot's lectures respecting aphthous vulvitis in children. Several interesting medico-legal cases are related in which the author was associated with M. Fournier, and in which there was great difficulty in the diagnosis. Here again the author cautions the medical man against forming a hasty opinion. A chancre should never be diagnosed from the chancre alone. The great point is to watch and see what follows.

ARTHUR COOPER.

ARTICLE 2144.

SANDS AND DENNIS ON TREPHINING IN INJURIES OF THE HEAD.

IN a paper read before the New York Surgical Society in March 1883 (*Annals of Anatomy and Surgery*, Sept. 1883) Dr. H. B. Sands, of New York, reported seven cases of trephining the skull. The

operation was performed once for simple fracture with depression, four times for compound fracture with depression, and twice for epileptic and paralytic affections following injury.

In discussing the general question as to the expediency of trephining in simple depressed or comminuted fracture, accompanied or not by symptoms of compression or other cerebral injury, the author states that he cannot admit the force of the argument that, by operating, the danger of subsequent cerebral mischief will be averted. Surgical literature, it is stated, abounds in cases of simple depressed fracture of the skull in which no alarming head-symptoms were present, and in which permanent recovery took place without any active treatment. In simple comminuted fracture without marked depression, but with considerable displacement of the fragments, the author would not trephine, on the ground that unless the loose pieces of bone were removed they would probably become necrosed, and thereby set up fatal intracranial suppuration. The surgeon can rarely feel certain that the comminuted portions of bone, even though freely movable, are completely detached from their vital connections; and, admitting their isolation to be complete, it has been shown by Dr. Macewen, of Glasgow, that their vitality might yet be preserved through newly formed attachments to the surrounding parts. Necrosis is comparatively rare in cases of simple fracture. When it does occur, the suppurative action exerted by the presence of the dead bone may, it is true, extend to the membranes of the brain. But, the author points out, there are so many recorded examples of necrosis following gun-shot injuries of the head, in which very large pieces of necrosed bone have been removed without the occurrence of cerebral symptoms, that preventive trephining can hardly be defended unless it can be shown to be an operation free from serious risk. Trephining performed in cases of simple depressed fracture with the object of removing sharp fragments of the inner table, which, it is assumed, may have penetrated the membranes of the brain, or the brain itself, is held by the author to be quite unnecessary. Clinical experience proves that in simple cranial fracture recovery from extensive osseous lesions often occurs without surgical interference. In the treatment of simple fracture of the cranial vault, unaccompanied by head-symptoms, the author would follow the conservative method sanctioned by the teaching and experience of the great majority of living surgeons. If our means of diagnosis, he says, were more exact, and if we were able to predict what cases would turn out badly if left to nature, active interference would often be an obvious duty; but, in the absence of such knowledge, it seems unjustifiable to subject the patient to an operation which must convert a simple into a compound fracture, with its attendant dangers of suppuration in close proximity to vital parts.

In discussing the treatment of simple fracture, accompanied by head-symptoms, the author asserts that, even when we trephine for depression, and the patient recovers, we cannot always be sure that this favourable result is due to our intervention. Compression of the brain resulting alone from a fragment of depressed bone is rarely, it is stated, of long duration. It is held that, if we except those rare instances in which compression is due solely to an extravasation between the dura mater and the cranium, there is no reason to expect that benefit would result from the application of the trephine. Where the fracture is of great extent and accompanied with severe contusion or laceration of the brain, or with copious hæmorrhage beneath the membranes, it is held to be extremely doubtful whether the trephine can ever be employed with advantage; while the operation, by adding to the mechanical injury and by favouring the occurrence of suppuration, must add to the already existing danger which threatens the patient's life.

There are two conditions, either one of which, in the opinion of Dr. Sands, renders imperative an immediate resort to the trephine. One of these is the case in which, with fracture of limited extent, there is reason to think, from its situation or from the occurrence of monospasm or hemiplegia, that a splinter from the inner table may have penetrated the motor tract of the cerebral cortex. The other case is that in which compression of the brain is caused by an accumulation of blood between the dura mater and the cranium. This accumulation, in a large majority of instances, depends on wound or laceration of the middle meningeal artery. The accident is most frequently accompanied by a compound fracture, but it may be met with in cases of simple fracture, and occasionally when no fracture is present. Dr. Sands states that, although this accident affords a clear and positive indication for the application of the trephine, yet there are but few recorded cases of the operation.

Of four cases of compound fracture of the skull, one, which seemed hopeless from the first, proved fatal at the end of thirty-six hours. The remaining three were examples of recovery after trephining for compound fractures of limited extent, accompanied with depression and comminution of bone, but not attended with any signs of serious injury to the brain. In such cases, Dr. Sands thinks, trephining is indicated; but, that success may be insured, the operation should be performed early and with strict antiseptic precautions. Dr. Sands is strongly opposed to active interference when the compound fracture is of great extent, and when the depression is not limited or abrupt. In those cases in which the brain has not suffered irreparable damage, many successes will, it is thought, be obtained by careful antiseptic treatment of the wound.

Dr. Frederic S. Dennis, in an interesting lecture on 'Trephining for the Relief of Paralysis in Head-Injuries' (*The Medical News*, No. 1, 1884), reports the following case as a good example of cerebral localisation. A man was working in a cellar, when a paving-stone fell upon him from a height of twenty feet, striking him on the head; and, when first seen, a few minutes after the injury, he was found to be quite conscious, but for a minute exhibited clonic convulsions of the left arm. There was a contused and lacerated wound over the right side of the head, at about the junction of the parietal with the temporal region. From this wound there was profuse hæmorrhage, and the bone was felt to be depressed. Soon after his admission into the Bellevue Hospital, the right pupil was larger than the left, and sluggish; the pulse was about sixty to the minute, the respirations were deep and noisy, the extremities were cold, and the patient perfectly conscious. There was partial paralysis of the left arm; the patient could not flex or extend the forearm, but could, with difficulty, partially abduct the limb. The man was at once placed under ether, and, the scalp-wound

having been enlarged, a stellate depressed fracture was exposed. The fragments were raised into position after removal of a small portion of bone with a Hey's saw, and sixteen pieces of loose bone were taken out of the skull from the bottom of the wound. The exposed dura mater was found to be intact, and the cerebral pulsations were observed beneath. The wound was cleansed and dressed with carbolic lotion, and in a short time healed by granulation. The paralysis at once subsided after the operation, and the temperature, pulse, and respiration remained normal during convalescence.

In his comments on this case, Dr. Dennis states that it is one of much interest, as illustrating recent views concerning cerebral localisation. The most common example of a pure monoplegia due to cortical lesion is, it is pointed out, brachial monoplegia, or paralysis of one arm. In brachial monoplegia of cortical origin, the lesion is situated in the middle third of the anterior central convolution. In this case, as there was no paralysis except of the left arm, there was pure brachial monoplegia, and the lesion therefore would be seated in the middle third of the anterior central convolution.

W. Johnson Smith.

Article 2145.

RUMMO ON THE PHYSIOLOGICAL ACTION OF IODOFORM.

A full account of the physiological action of iodoform, with an exhaustive bibliography, written by Dr. Gaetano Rummo, appears in the *Archives de Physiologie*, Nos. vi. and vii., 1883. The following are the chief physiological facts which he brings out.

1. *Fatal Doses for different Animals.*—In frogs, 2 centigrammes are sufficient to cause death if administered by the mouth or injected into the peritoneal cavity. In guinea-pigs, death occurred in two or three days after a dose, similarly given, of 1·5 to 2 grammes. In rabbits, 2·50 to 2·75 grammes were required, while for a dog, weighing 10 kilogrammes, 4 grammes were found to be fatal.

2. *Action on the Frog's Heart.* — Iodoform, in moderate doses, lowers the force and frequency of the ventricular contractions, finally arresting them in diastole; but very small doses at first increase the force of the ventricular systole. There is some resemblance to the action of veratrin in this slowing of the heart. It is not antagonised by atropia, but excision of the pons Varolii destroys the cardiac action of the drug. If the heart be excised when the slowing is well marked, it recommences to beat immediately, but not always quite so fast as before.

3. *Action on the Capillaries of the Frog's Web.*—Iodoform, given internally, produces first dilatation and then contraction of these vessels.

4. *Action on the Circulation in Mammals.*—Moderate doses first retard and strengthen the pulse, with a slight increase of arterial tension. Full doses (2 to 4 grammes for a dog) produce more marked slowing and enfeeblement, with a fall of blood-pressure, which passes off in four or five hours. After large doses the pulse is first slowed, then becomes quick and irregular, with convulsive respiratory movements. Section of the vagi prevents the development of these phenomena. The action of the drug is therefore in this, as in the other experiments, seen to be different in the early and the later periods after its administration.

5. *Action on Temperature.*—Small doses in the case of dogs have no effect. A dose of 2 to 3 grammes produces a *rise* of from 1° to 1°·50 Cent. (1°·8 to 2°·7 Fahr.); while 4 to 5 grammes produces a marked *fall* of 4° to 5° Cent. (7°·2 to 9°·0 Fahr.).

6. *Action on the Nerve-Centres.*—Iodoform during the first period of its action simply lowers the functional activity of the nerve-centres; it then diminishes and finally abolishes voluntary movements—especially in the frog—with some anæsthesia and diminished spinal reflex. It then lowers the excitability of nerve-trunks (to external stimuli, *Rep.*) and power of muscular contractility. In the second period of its action, it excites the nerve-centres, and produces clonic and tonic muscular contractions.

7. *Action on Vomiting, &c.*—In the dog small doses produce uneasiness merely. Full doses, as 4 or 5 grammes, are followed by vomiting and diarrhœa.

8. *Action on Secretion.*—Iodoform at first slightly increases the flow of saliva, bile, and succus entericus; later, the rate of secretion is much more largely increased.

9. *Mode of Elimination.*—Iodoform is eliminated in small quantities unchanged by the lungs; but, chiefly as the alkaline iodate of sodium. It appears in the urine within an hour after its administration, and is present there for three days.

10. *Action on the Kidneys, &c.*—It is quickly removed in the form of the alkaline iodate, if the doses be moderate; but this salt is not formed if the quantity given be large. Elimination of the drug is then stopped, and albuminuria or hæmaturia occurs. The kidney passes into a condition of glomerulo-nephritis, while in addition there are general fatty degeneration, especially of the liver, and inflammatory changes in the cord similar to those of acute pollio-myelitis.

11. *Action on Development of Bacteria.*—Iodoform is more powerful in preventing the appearance of bacteria than in arresting their multiplication. It and its soda-salt, when dissolved in oil of turpentine, are readily fatal to all micro-organisms.

Walter Pye.

Article 2146.

SCHRAMM ON A CASE OF LAPAROTOMY.

Dr. J. Schramm, of Dresden, relates in the *Berliner Klin. Wochensch.* for Sept. 10, 1883, a case in which laparotomy was performed twice in one year on the same patient, for hydronephrosis of a movable kidney, with establishment of a fistula from the pelvis of the kidney. The patient was a widow, aged 47. During her married life of seven years she had thrice borne children; on the last occasion, thirteen years since, she had borne female twins. During the last two years menstruation had become irregular, and had ceased entirely at the beginning of 1881. In the autumn previously she had begun to experience pain on pressure on the right side of the abdomen, where a tumour could be felt. On one occasion, making an extra exertion in reaching her right arm backwards, she felt a sharp pain in the lumbar region, which she described 'as if something were torn in her inside.' The tumour, gradually increasing in size, could be readily removed from side to side as she lay on her back. Severe shooting pains in the seat of the tumour, sleeplessness, constipation, and, lastly, dyspnœa, concurred to prevent her from

earning her living as a straw-hat maker. Admitted into the hospital in Feb. 1881, she is described as a large, strongly built, and fairly nourished woman. During the last year she had become emaciated. Progression was difficult, and could only be accomplished by the body being bent down. Her appetite was good. Examination discovered a smooth elastic tumour filling the right half of the abdomen. In deep inspiration, the tumour moved somewhat lower and to the left of the middle line. Distinct fluctuation could be felt in the tumour. On percussion, dulness was observed to extend from the middle line backwards into the lumbar region, and to about four fingers' breadth above the navel. When she was lying down, a resonance extended downwards towards the pelvis on the left side. By vaginal examination it was found that the uterus was retroverted, but had no attachment to the tumour. The left ovary only could be reached, the right being out of reach. The urine, normal in quantity, had traces of albumen. The patient had become much emaciated; the circumference of the body at the level of the umbilicus was 34 inches; the measurement from the ensiform cartilage to the umbilicus 6¾ inches, from the umbilicus to the pubes 5½ inches. On February 23 an exploratory puncture was made with a trocar, and about 800 grammes of a thin reddish fluid was removed, containing only blood corpuscles and albumen.

The diagnosis lay between ovarian tumour and hydronephrosis. The cavity of the abdomen was laid open by an incision about four inches in length along the linea alba, by which the tense tumour was exposed. The contents were forcibly discharged immediately the cyst was punctured, some of the contents escaping into the cavity of the abdomen by the side of the trocar. When the cyst had collapsed and had subsided into the abdominal cavity, a careful search was made for the ovaries. The right ovary exhibited an early stage of cystose degeneration, and was removed. The incision was then closed by stitches, and a drainage-tube inserted. A favourable recovery seemed to be taking place, when a reappearance of the tumour was evident. Another laparotomy was decided upon, and performed in November of the same year. By means of a fine trocar about 1,500 grammes of a thin amber-coloured fluid, possessing a urinous odour, were removed. The edges of the cyst were united by stitches to the abdominal integuments, and a drainage-tube inserted. The operation occupied two hours. The patient progressed favourably, and on December 13 was pronounced well enough to leave her bed. On the following day the drainage-tube was removed, and an apparatus was adapted for the reception of the urine. The incision into the abdominal wall was perfectly cicatrised. The patient remained under observation in hospital until January 18, 1883, when she was discharged.

Chemical examination of the fluid removed at the time of the operation gave sp. gr. 2,906; solid constituents 1·18 per cent., consisting of chlorides and sulphates of lime, soda, and potash, and a trace of phosphoric acid; reaction alkaline, 0·11 per cent. albumen, 0·29 urea. The fluid from the cyst was examined by Dr. Geissler, who found albumen, urea, *e.g.* saline matters, carbonate, sulphate, phosphate, and chloride of the alkalies and lime. Urine continued to pass by the fistula, the original tumour gradually decreasing until it could not be traced either by palpation or percussion. A caoutchouc bag was affixed to a tube which passed to the depth of six centimètres into the fistulous opening close to the navel. This apparatus caused no inconvenience. She was now able to resume her occupation. The difficulties in the way of diagnosis in this case are obvious. Little or no assistance was obtainable from medical literature, cases of movable kidney being rare. Of so much, however, as the author was cognisant of he availed himself, and has given a brief summary.

In the case now recorded, Dr. Schramm founded his diagnosis upon—1. the mobility of the tumour in all directions; 2. the absence of the colon from the front of the tumour; 3. the presence of a thick portion of renal parenchyma in the wound; 4. the direction of the fistula, with the flow of urine.

W. B. KESTEVEN, M.D.

ARTICLE 2147.

CORNILLON AND MALLAT ON THE DOCTRINE OF ACETONÆMIA, *APROPOS* OF A CASE OF DIABETIC COMA.

MM. CORNILLON AND MALLAT (*Le Progrès Méd.*, No. 50, 1883) report a case of diabetic coma. A young man, aged 25, a cooper, arrived in Vichy very tired, hungry, and thirsty, after a railway journey of fourteen hours. At that time nothing peculiar was noticed in his manner. He took some soup and retired. It was noticed that his respiration was hurried and laboured, which he explained as the result of a cold. He slept well, got up at five o'clock, went downstairs, drank a quantity of milk, and returned to bed, saying, 'We have all three been sleeping; the station-master, another man, and I.' He was supposed to be mad. During the day he went downstairs several times to get something to drink; his language was always incoherent; his dress disordered; he opened the window because he felt suffocated, &c. When seen at 4 P.M. he could not answer any questions, repeating to all inquiries, 'Ah, vrai! ce n'est pas à faire.' It was known that he had been under treatment the year before at the military hospital for diabetes, that he had served four or five years in an artillery regiment, and that he was sober in his habits. He was sent to the civil hospital. When seen there he was comatose. There was no odour of ether, chloroform, or alcohol. There was no œdema, slight cyanosis of the extremities, great emaciation of the whole body. Respiration 10 per minute; pulse small, regular, 120. There was no cardiac murmur, or râles over the lungs. The pupils were equal, moderately contracted. There was no heat of the head. The respirations became more frequent, 42; pulse, 140; temperature, 96°·6. The bladder contained 650 grammes of urine of density 1022; sugar, 21·08 grammes; albumen, 0·52 grammes; and urea, 8·96 grammes per litre. It gave the characteristic red-brown colour with perchloride of iron. Its odour was normal.

A little later there was some excitement, and there were some convulsive movements in the right arm; then the coma reappeared, and he died the day following the seizure, at 5.30 A.M. At the necropsy the only noteworthy facts were congestion of the pia mater, tubercular granulations in the right lung, pallor of the cortical substance of the kidneys, with contrasting pinkness of the medullary portion. The urine showed density, 1021; sugar, 25·75 grammes; albumen, 0·30 grammes; urea, 7·10 grammes per

litre ; and gave the characteristic colour with perchloride of iron. The bile, pancreatic juice, ventricular fluid from the brain, and blood-serum gave no reaction with ferric chloride.

The suggestion of uræmia is opposed by the facts that the amount of urea excreted in twenty-four hours was rather above the normal, and the kidneys were healthy. Yet acetonæmia was not considered to be the cause, for the following reasons. There was no chloroform-like or other peculiar odour of the breath. The urine gave the reactions with perchloride of iron and sulphuric acid ; but the other fluids, especially the blood, did not. It is doubtful whether acetone can cause such symptoms, Frerichs having given as much as 20 grammes daily to patients, who felt no appreciable effects. Moreover, Jaksch has found this reaction in the urine of non-diabetics, fever patients, cancer, &c. The authors have often found it in emaciated diabetics, very seldom in fat ones. Mosler has found this reaction in the saliva of diabetics, but the authors find that the saliva of healthy persons gives the same. They deny that acetone in distilled water, or acetone added to healthy urine, give the ascribed reactions. Heat destroys the capacity of the urine to give the reaction, but the distillate does not give it either. Cold does not affect it, nor does neutralising or alkalinising the urine. Robert Saundby, M.D.

Article 2148.

GUARESCHI, MOSSO, BRIEGER, AND POEHL, ON PTOMAINES AND PUTREFACTION-ALKALOIDS.

J. Guareschi and A. Mosso (*Jour. of Chem. Soc.*, 1883, p. 1157, from *Jour. de Pract. Chem.*, second series, xxvii., p. 425) state that they took the enormous quantity of 140 kilogrammes, or nearly three cwt. of washed fibrin from ox-blood, and allowed it to stand in a vessel for five months, at the end of which time the fibrin had been converted into a thick dark-red homogeneous liquid. This was acidulated with sulphuric acid, evaporated at 60° C. (140° F.) to a thick paste ; baryta water was added to alkaline reaction ; it was filtered after twenty-four hours, and the filtrate and wash-waters shaken for a long time with chloroform. The extraction with this solvent was repeated twelve times, all the extracts containing the same ptomaine. The chloroform extract was evaporated, and the resulting dark golden-yellow oily residue mixed with tartaric acid ; a resin that then separated was removed by shaking with ether, and the now colourless (*sic*) liquid mixed with an excess of 50 per cent. potash, and the oil liberated after this drastic treatment was extracted by ether. On evaporating the ethereal solution, a strongly alkaline *brown* oil, obtained from the above *colourless* solution, of a faint pyridine or conine-like odour was obtained, which yielded a hydrochloride in deliquescent colourless crystalline plates. Its platinum salt had the composition $C_{10}H_{15}N.H_2\,PtCl_6$. The hydrochloride acted as the salt of an alkaloid, and acted physiologically like curare, though less powerfully.

In the same journal (p. 1159, from *Berl. Ber. der Chemie*, xvi., p. 1405) L. Brieger is stated to have given further details respecting the hydrochloride of an alkaloid, $C_5H_{14}N_2.H_2Cl_2$, and another poisonous base $C_5H_{11}N_1$, both formed by the putrefaction of flesh.

Mr. Velez, also in the same periodical (*Jour. of Chem. Soc.*, 1883, p. 1157) gives an interesting *resumé* of A. Poehl's researches (*Berl. Ber. der Chemie*, Band xvi., p. 1975) on putrefaction-alkaloids in their relations to ergotism epidemics, a paper which we give almost in its entirety.

Epidemics caused by unsound bread have been observed to be preceded by long-continued rains and floods, which cause an abundance of ergot in the following harvest ; and these epidemics take two forms, *ergotismus convulsivus*, more common in France and Switzerland, and *ergotismus gangræno-sus*, which has prevailed in Russia, Germany, and Sweden. In Russia there were outbreaks of the latter in the years 1832 and 1837, and of the former in 1824. In 1881 Russia was threatened with another outbreak of ergotism, and a commission was appointed to investigate the subject ; and of this commission Poehl was a member.

Eichwald has shown (1) that the appearance of the epidemic stands in no direct relation to the proportion of blight in the grain ; (2) that animals cannot be so inoculated as to produce in them symptoms of ergotism ; (3) that the putrefaction of the grain is a necessary condition of the ergotism ; (4) that the toxic results are produced only in certain stages of the decomposition ; (5) that the various forms of ergotism cannot be explained by the quantity of ergot introduced into the system, or its time of action.

Poehl elucidates the following conditions of the putrefaction-alkaloids in blighted rye-meal : (1) the conversion of the starch into glucose ; (2) fermentation of the glucose with formation of lactic acid ; (3) peptonisation of the albumins by the peptic action of the mycelium of *claviceps purpurea* ; (4) conversion of the peptone into ptomopeptone, and its decomposition, with formation of putrefaction-alkaloids.

1. In the year 1873, Poehl recognised that the action of damp on the meal produced a large proportion of glucose, by the action of a ferment contained in the endocarp and perisperm of the grain. Hammarsten has also proved that the starches of maize, rye, and oats are more easily converted into glucose by diastatic action than the starches of potatoes, peas, and wheat. Bell, too, has recently shown (*Proc. Royal Soc.*, Vol. xxxv., p. 161) that the albuminoids of rye have a greater diastatic action on starch than those of other cereals. It may be mentioned, in this connection, that in the epidemics caused by maize a form of mildew appears in this grain, and has the power of peptonising albumins, with the formation of putrefaction-alkaloids.

2. In presence of a ferment, the glucose would further decompose into butyric and lactic acids. Poehl further observed that rye-grain, even if not attacked by the claviceps, when merely exposed to damp, evolved trimethylamine when heated with alkalies ; and it is well known that albumins, at the moment of putrefaction, evolve ammonia or amines under the action of alkalies.

3. One of the most important phenomena of the change of the albumin of meal is the formation of peptones ; it has also been noticed that lactic acid is a better test of peptonisation than any other acid, as phosphoric, acetic, oxalic, or tartaric. Poehl has frequently observed the formation of peptone from the albumin of meal, caused by the action of *penicillium glaucum* and the fungus of *claviceps purpurea*, the latter of which produces the most marked effects.

4. Tainted rye-meal, when exposed to a damp

atmosphere, entered more readily into decomposition, with the formation of putrefaction-alkaloids, than did the untainted meal. Large quantities of tainted and of untainted rye-meal were allowed to rot, and the putrefying masses were examined for alkaloids by the Stas-Otto process. From alkaline and from acid ethereal extracts of the masses, substances were obtained which gave the general reactions of alkaloids, and differed from one another towards precipitants and colour-reagents, according as they had been obtained at various stages of the decomposition. By shaking the alkali solution with chloroform, benzine, and amyl-alcohol, an alkaloid was obtained which gave the general alkaloidal reactions, and a beautiful violet colorisation with sulpho-molybdic acid (Fryhde's reagent), resembling that produced with morphia; but the absorption spectra of the two alkaloids differed most markedly.

Starting from the view that peptones on further putrefaction are converted into ptomopeptones, which yield nitrogen when heated with sodium hypobromite, then the quantity of nitrogen so evolved may be taken as a measure of this conversion. From the results Poehl obtained in comparative experiments made with damp rye-meal, and meal mixed with peptic ferment, with 5 per cent. of ergot, and with blight respectively, he deduces the following conclusions. 1. Ergot and mould have a peptonising action on the albumins and favour their decomposition. 2. The degree of putrefaction of the albumins is directly proportional to their peptonisation. 3. In the first stages of putrefaction, the decomposition of the albumins is greater in ergot meal than in mouldy or pure meal; but in the more advanced stages these differences are not so marked.

THOMAS STEVENSON, M.D.

ARTICLE 2149.

PETRI ON STAINING TUBERCLE-BACILLI IN SPUTUM BY A MODIFICATION OF KOCH'S AND EHRLICH'S METHOD.

DR. PETRI, in the *Berliner Klin. Wochensch.* of Nov. 26, describes his method. The chief modifications are, first, the use of acetic instead of nitric acid; and, second, the use of a brass plate, kept at a temperature of 100° to 110° C. (212° to 230° F.) by a spirit-flame beneath, for drying the sputum and heating the staining fluids. It is alleged that the preparations can remain longer (even for hours) in the acetic acid, without injury, than they can in nitric acid, and that the bacilli keep their colour better after the former, whereas they are apt to fade to a yellowish colour after some months when prepared with nitric acid. The method described is as follows.

Saturated and filtered solutions in alcohol of fuchsin and malachite-green are prepared beforehand, and the actual staining fluids are made by adding 5 cubic centimètres of these to 100 cubic centimètres of distilled water. The addition of aniline water is of no advantage.

The covering glass, with a thin layer of the sputum on it, is laid upon the heated brass plate for five or ten minutes, that the sputum may be dried and fixed, and is then placed face downwards on some fuchsin solution in a shallow porcelain dish (which has been previously heated on the same plate till a few drops of water from condensation appear upon the under-surface of a glass plate which covers it), and the whole is set aside to cool for ten or fifteen minutes. The covering-glass is then taken out, and acetic acid is poured over it in a glass dish. After a few minutes it is sufficiently decolorised, and then water is poured over it three or four times.

Finally it is treated with the warmed malachite-green solution for about five minutes, again treated with water, and dried upon a piece of filtering paper which lies upon the brass plate.

It may now be placed upon a drop of glycerine, and investigated with an immersion-lens, with chloral hydrate in glycerine. This is better than oil-immersion, as it can be cleaned off with a little water without trouble.

If a permanent preparation be desired, it is mounted in Canada balsam straight from the drying paper.

The mounting is best done by having the stopper of the Canada balsam bottle provided with the usual glass rod, which takes up just enough melted balsam for one mounting, and the whole is kept upon the convenient brass plate. A drop is placed upon a dry slide, and the dried covering-glass laid upon it. Then the slide is placed upon the plate to warm, and the solidified balsam melts again and spreads out beneath the covering-glass, driving the air before it, while the covering-glass may be adjusted to a convenient position.

The whole process may be gone through in about twenty minutes. If time be no object, the sputum may remain in cold fuchsin solution over night, but it should not afterwards remain in acetic acid more than an hour (a few minutes are usually enough). The bacilli of Koch then appear red, all other constituents of the sputum being blue-green. Simple rose-aniline nitrate is used for the fuchsin solution. Alkalinity of the colouring agent is not necessary. This property of tubercle-bacilli (viz., the retaining firmly the aniline colours), which was discovered by Koch, is only shared by the bacilli of leprosy, so far as is yet known.

Nearly a year ago, however, Dr. Petri found that *the spores and buds of the ordinary fungus species found everywhere* behave exactly like the above two kinds of bacilli, with stains and acids. He discovered this while systematically investigating all kinds of micro-organisms. In a sputum which had been long exposed, Dr. Petri found, on staining, structures which he pronounced to be spores of species of mould. To prove this, he cultivated two kinds of aspergillus, penicillium, and two kinds of mucor, oïdium lactis and empusa muscæ. Only the mucor species showed the characteristic behaviour of the bacilli of Koch, and of them, indeed, only the spores and buds, while the mycelium and hyphæ were stained blue-green only.

Though all this chiefly interests botanists, it is also of importance to medical men to know that, as might have been expected, there are several kinds of vegetable cells which behave to aniline stains like the bacilli of Koch; and further study will give us still more.

E. J. EDWARDES, M.D.

MEDICAL WOMEN IN INDIA.—The Bombay Town Council has recommended the Corporation to contribute 6,000 rupees per annum for three years towards the current expenses of a dispensary which Mr. Cummoo Suleiman, a wealthy citizen of that place, has undertaken to build to afford medical relief to women by doctors of their own sex. The Government has promised to give a free site for the building.

Article 2150.

DE WECKER AND SATTLER ON JEQUIRITY-OPHTHALMIA. *

Since the employment of an infusion of the seeds of the jequirity plant † for the production of ophthalmia was first brought under the notice of European ophthalmic surgeons, much has been written on the subject. The fact that the ophthalmia so produced was said to be useful in intractable cases of trachoma with pannus, was quite sufficient to awaken a widespread interest. Among the many papers written last year on this subject, those of De Wecker and Sattler are especially important. The former considers it from a clinical standpoint; while Sattler, who first demonstrated a specific organism in trachoma, now gives us the pathology of jequirity-ophthalmia.

Sattler thus describes the course of the inflammation produced by a single application of an active infusion on the normal human conjunctiva. The application itself is quite painless, and for the first three hours no subjective or objective symptoms appear; this is the incubation period. Then the inflammation begins, advancing slowly at first, but afterwards rapidly, and ultimately reaching a great height; so that, sixteen hours after the application, we have the appearance of a severe ophthalmia. The lids are gummed together, swollen, shining, hot, and tender. The tarsal conjunctiva is covered by a thick adherent greyish-yellow membrane, as in a true croupous conjunctivitis. The oculo-palpebral fold and ocular conjunctiva are greatly swollen; the former is dark-red with a greyish-yellow coating, and the latter yellowish-red and swollen. The patient is restless, and several times Sattler observed a body-temperature of over 100°·4 F. Sometimes the lymphatic gland in front of the ear swells, and there is much nasal discharge. About twelve to sixteen hours later the height of the process is reached, and it remains in this condition about a day; the membrane can now be easily detached from the lid, frequently exposing ecchymoses on the oculo-palpebral fold. The secretion is profuse and purulent. On the fifth or sixth day of the disease, the new formation of membrane on the palpebral conjunctiva ceases, but for some days longer it remains at the bottom of the oculo-palpebral fold, and frequently leaves a smooth, white, slightly cicatricial contracted spot. It is some weeks before the last trace of redness, unevenness, and dirty yellow discoloration of the conjunctiva disappear. In some cases, at the height of the inflammation, there are superficial opacity and loss of corneal epithelium; but these changes do not prove serious after a single application.

By an 'active infusion' Sattler means one obtained by macerating the bruised seeds (divested of their red covering) for twenty-four hours in water at the usual temperature of the room, and used fresh—*i.e.* at once, or soon after filtration; the proper strength is about ½ to 1 per cent. of the bruised seeds. A short period of maceration (from three to six hours) produces a less active infusion. Increased concentration does not always produce a proportionately great intensity of inflammation. The action of the infusion decreases with its age, and finally it becomes inert. It is much less active when prepared in an incubation-apparatus (91° to 97° F.), while the use of ice-water and maceration at this temperature for twenty-four hours have no marked injurious effect on its action. By repeated application, at intervals of about two hours, we can increase the intensity and duration of the ophthalmia.

He describes the ophthalmia produced in rabbits. If the ophthalmia so induced leave visible alterations in the conjunctiva, the animal has perfect immunity from a renewed application. Even when the changes are comparatively slight, repeated applications of an active infusion only produce a slight mild conjunctivitis.

Chemically, the infusion shows a considerable proportion of a form of albumin, differing in some respects from legumin; also a crystalline substance which proved inactive when applied in a 1 per cent. solution to the conjunctiva. The activity of the infusion is therefore probably dependent on the presence of some vegetable ferment, and Sattler now propounds the following questions for his solution. 1. Does there always exist in the infusion a known form of micro-organism, and can this same form be found again in the diseased tissues and in the secretion coming from them? 2. Is the infusion inefficient when this micro-organism is removed or rendered inactive? 3. Can this organism be transferred from the infusion to another cultivating substance, and be bred pure for a succession of generations? and can the same form of ophthalmia be produced by bringing this purely bred material into contact with the conjunctiva?

1. On microscopic examination, the infusion invariably shows an easily recognised bacillus in enormous numbers. Sometimes immediately after filtration, but generally several hours later, we find the first rods as cylindrical homogeneous opaque bodies, about 0·58 micromillimètre thick, and 2·5 to 4·5 micromillimètres long. Some are at rest, others swinging about or moving actively in the field. A few hours later they are increased in number, and most of them are engaged in division or have already divided to form twin rods. There is now more diversity in the length and thickness of the bacilli, and soon some of them begin to aggregate on the surface of the infusion, forming larger and smaller 'islands.' These islands gradually grow, and finally form a layer of varying thickness over the entire surface, while beneath it innumerable rods are moving. About this time spores begin to form; a dark substance collects at the poles of the short rods, as distinct spherical knobs of rather high refractive index. The longer rods generally show one or two such dark spots in their middle, and long distinct threads appear, inclosing a large number of spores. The pellicle is entirely composed of these forms, and is peculiarly distinct microscopically from the pellicle of other kinds of bacilli. The spores collected and kept dry for weeks germinate when moistened, and the dry spores withstand heating to 110° C. (230° F.) for five minutes. They are destroyed by boiling the fluid for fifteen minutes. In power of resistance, they are somewhat inferior to the spores of a hay-infusion. The bacilli are found in the spore-producing stage in the purulent secretion of the conjunctiva, in the false membrane, and in the infiltrated conjunctiva. Some of the secretion will produce a conjunctivitis like the original, but much milder.

* Dr. L. de Wecker on the Jequirity-Ophthalmia. (Zehender's *Klin. Monatsbl. für Augenh.*, Jan. 1883.)
H. Sattler on the Nature of Jequirity-Ophthalmia. (*Op. Cit.*, June 1883.)
Dr. L. de Wecker on the Clinical use of Jequirity-Ophthalmia. (*Op. Cit.*, July 1883.)

† *Abrus precatorius*, one of the Leguminosæ.

2. It is difficult to get the infusion absolutely free from all active bacilli and keep it so. Thymol (1 in 1,100) renders it sterile and quite inert. 3. Sattler was able to separate the bacillus, and breed it pure for a succession of generations in different cultivating substances. Some of this material produced a conjunctivitis corresponding to that described above in its course and general properties, but less severe. Sattler believes this ophthalmia to be certainly due to the bacillus; for the conjunctivitis produced by the micrococci and other forms of bacilli, present in vegetable infusions generally (and also in the jequirity infusion), produce a conjunctivitis very slight and temporary, not the least like that caused by the jequirity-bacillus. He draws no exact conclusion as to the usefulness of the jequirity-ophthalmia, but believes it to be most suitable for the very severe cases of trachoma, in so far as the ophthalmia is in itself decidedly dangerous.

De Wecker's views may be stated briefly in the form of the following propositions which he himself enunciates. 1. Without any doubt we can by use of this infusion produce a purulent ophthalmia of a croupous nature, whose intensity we can regulate by the number of applications and by the strength of the infusion. 2. Without any doubt the jequirity-ophthalmia quickly cures the granulations; and, even if one be obliged to excite it several times, this treatment is less unpleasant and less dangerous than the inoculation method, and the jequirity-ophthalmia subsides spontaneously without any special treatment, provided only that the patient be kept for eight to twelve days in a darkened room. 3. Without any doubt the cornea runs no risk during the existence of the jequirity-ophthalmia (in his later paper he adds), provided that, in the use of strong, and especially of 5 per cent. infusions, we do not employ too free or too closely consecutive applications. He has produced this ophthalmia in many cases of simple corneal ulceration with normal conjunctiva, as well as in extensive ulceration with pannus, and has always observed a highly beneficial effect on the cornea, and has never caused perforation. He employs it also in cases of simple leucoma with most satisfactory results.

R. Marcus Gunn.

Article 2151.

KLEIN ON THE ETIOLOGY OF JEQUIRITY-OPHTHALMIA.

Dr. E. Klein, F.R.S., has reported (*Centralbl. für die Med. Wiss.*, 1884, No. 8) the very interesting result of a research into the origin of the active principle in jequirity infusion, which produces ophthalmia. The jequirity seeds were freed from their perisperm, and an infusion was prepared in a sterilised vessel with distilled water sterilised by boiling. The strength of the infusion, which was made with lukewarm water, was about half per cent. After half an hour the infusion was filtered through a purified filter into a vessel also purified by heat. Sterilised peptone solution was inoculated with the filtrate; the solution, after being kept in the incubator for days, remained quite clear and free from organisms. At the same time as the peptone solution was inoculated, a small quantity of the jequirity solution was introduced into the conjunctivæ of two rabbits with the same pipette; in twenty-four hours the two rabbits had the typical intense ophthalmia. In a second more extended series of experiments with fresh jequirity infusion, the results were identical. From these experiments, Klein concludes that no bacillus was present in the jequirity infusion introduced into the cultivation-fluids and into the eyes; yet severe ophthalmia was excited; therefore the active principle of fresh jequirity infusion has nothing to do with a bacillus, or with its spores. This conclusion he strengthens by the following considerations. The use of the same fluid drawn from the infusion at the same time with the same pipette proved that the jequirity infusion introduced into the eyes and into the culture-solutions was quite identical in all its properties. He ascertained that the culture-material was suitable for the growth of the jequirity bacillus, which would flourish in it from twenty-four to forty-eight hours after it was introduced. The pus from the eyes inflamed after the introduction of this jequirity bacillus contained no trace of the bacillus or of its spores, and it had further no infective property. Sattler believed that its infective property was slight, but Klein finds that it has, in fact, no such property. If the jequirity infusion be boiled after filtering, its power of exciting ophthalmia is destroyed. This has been attributed to the destruction of the bacillus, but incorrectly, for the power of exciting inflammation is lost after boiling for a period much too short to destroy the reproductive power of the bacillus. Boiling for a short time does not render the spores incapable of germinating.

Jequirity infusion can be sterilised by boiling for half an hour. If the infusion thus sterilised be inoculated with a drop of jequirity infusion which has not been sterilised, and the inoculated fluid momentarily raised to the boiling-point, it will, when kept in the incubator, quickly swarm with the jequirity bacillus; but such an infusion thus swarming with the bacillus has no power to produce ophthalmia.

Dr. Klein concludes by stating his opinion, on the ground of these observations, that the proposition of Sattler that the jequirity infusion owes its power of exciting inflammation to a bacillus is unfounded.

The result of the research appears to be one of great importance, as throwing a side light on other inflammatory processes commonly attributed to the pathogenic action of various bacilli.

Dawson Williams.

Article 2152.

LEBLOND ON ARTIFICIAL FECUNDATION.

An important paper was recently read by Dr. Leblond at the Société de Médecine Légale, on the legal aspect of artificial impregnation. From the report it appears that a physician in Bordeaux claimed 1,500 francs in a court of law for having performed an operation for artificial fecundation on a patient. The patient had not become pregnant, and refused to pay the fees. The judge in his summing up said: 'It had been proved that the husband and wife, A——, attracted by the advertisements of Dr. L—— in the journals, and by the promises he makes to the public to destroy sterility by a certain process, had consulted Dr. L——, and that the wife had undergone an operation known as artificial fecundation, and which appeared to have produced no result, and not even to have been

practised with the precautions indicated by science. He would not, however, investigate the scientific value of the proceeding resorted to by L——. The tribunal could see that it consisted not merely in suppressing either in a man or a woman the causes of sterility, so as to render them apt for generation, but in actually aiding in the act of copulation in the most intimate manner between man and wife, as intermediary, using means repulsive to the laws of nature, and which would, if abused, come to be a serious social danger. The dignity of the married state did not comport with such practices, and it was to be hoped on that account that they would not be transported from the domain of science into that of practice. He gave judgment for the defendants, and refused Dr. L—— his costs.' Dr. Leblond concludes his report on the case by stating that from the operation of discission of the cervix uteri to artificial fecundation there is only a step; further, that such authors as Courty, Pajot, De Sinéty, Lutaud, Eustache, Marion Sims, and Gaillard Thomas have practised or described it. In the discussion which succeeded, Drs. Gallard, Charpentier, Lutaud, Leblond, and Brouardel, while agreeing that due precautions should be taken, endorsed Dr. Leblond's view that the operation should in certain cases be performed. The report was then unanimously adopted by the society. [For our part, we are unable to acquiesce in the proposition that artificial impregnation is an operation the practice of which is consistent with the preservation of the dignity of medicine and the self-respect of the physician. The procedure of a physician filling a syringe with semen which is lying in the vagina immediately after coitus and then injecting this fluid into the cervix uteri is to us repulsive. Nothing in our opinion can justify the performance of this so-called operation, nor do we intend in any circumstances to assist in this way.—*Rep.*]

Fancourt Barnes, M.D.

SURGERY.

RECENT PAPERS.

2153. Poinsot.—Operative Interference in Cases of Irreducible Luxation. (*Rev. de Chir.*, No. 8, 1883.)

2154. Clark.—The Immediate Suture of Divided Nerves. (*Glasgow Med. Jour.*, October.)

2155. Arnaud.—Primary Tubercular Arthritis. (*Rev. de Chir.*, No. 7, 1883.)

2156. Küster.—On Arresting Arterial Hæmorrhage by Antiseptic Plugging: a Case of Wound of the Vertebral Artery thus treated. (*Berliner Klin. Wochensch.*, No. 48, 1883.)

2157. Zakharevitch, V. M.—On the Treatment of Fistula Ani. (*Vratch.*, 1882, No. 36, pp. 601–2.)

2158. Lindenbaum, V.—On Naphthalin Dressing in Frost-bite, &c. (*Vratch.* 1883, No. 17, pp. 259–60.)

2159. Diakonoff, P. T.—On Naphthalin in the Treatment of Wounds. (*Vratch*, 1882, No. 39, pp. 647–9; and 1883, No. 2, pp. 17–18.)

2160. Zakharevitch, V. M.—On Two Cases of Death after Extraction of Teeth. (*Vratch*, 1882, No. 34, pp. 563–6.)

2161. Kitaevsky, M. K.—On a Case of Gastrostomy in Cancerous Stricture of the Œsophagus. (*Vratch*, 1882, No. 37, p. 611–13; and No. 39, pp. 652–4.)

2162. Zakharevitch, V. M.—On a Case of Incarcerated Femoral Hernia cured by Large Enemata. (*Vratch*, 1882, No. 36, p. 602.)

2163. Treves.—The Direct Treatment of Spinal Caries by Operation. (*Brit. Med. Jour.*, Jan., 1884, p. 58.)

2164. Whitehead.—Spina Bifida in a Woman, aged 28, Cured by Operation. (*Brit. Med. Jour.*, Jan. 1884, p. 165.)

2165. Studdert.—Gangrene of Arm following Injury to the Thumb. (*Brit. Med. Jour.*, Dec. 1883, p. 1235.)

2166. Rand.—A Means of Ascertaining the Course of the Small Bowel in Abdominal Section. (*Brit. Med. Jour.*, Dec. 1883, p. 1235.)

2167. Jones.—Suppurating Hydatid of the Abdomen; Free Incision; Recovery. (*Lancet*, Dec. 1883, p. 1041.)

2168. Bond.—The Treatment of Paraphimosis. (*Lancet*, Dec. 1883, p. 1108.)

2169. Chavasse.—A Method of Opening Psoas Abscess. (*Lancet*, Dec. 1883, p. 1119.)

2170. Le Page.—The Evacuation of Deep Abscesses. (*Brit. Med. Jour.*, Dec. 1883, p. 1232.)

2171. Bell, H. R.—A New Method of Exposing the Knee-joint to Remove Pulpy Degeneration of the Synovial Membrane. (*Lancet*, Dec. 1883, p. 1041.)

2172. Weiss.—Primary Extirpation of the Astragalus in Cases of Irreducible Dislocation. (*Revue Méd. de l'Est*, Feb. 1884.)

2173. Cauchois.—Regeneration of Bone after Excision of the Elbow-joint. (*Jour. de Méd.*, Feb. 1884.)

2174. Mollière.—Extirpation of Benignant Tumours of the Breast situated above the Nipple.

Art. 2153. *Poinsot on Operative Interference in Cases of Irreducible Luxation.*—M. G. Poinsot, of Bordeaux, in an able review on direct operative intervention in irreducible luxations (*Revue de Chir.*, No. 8, 1883), has collected a number of interesting clinical records, on which are based the following conclusions. Luxations, if studied with regard to the feasibility of operative treatment, may be arranged in three classes. 1. Recent luxations that have not existed longer than eight days, and in which the process of repair has hardly begun; 2. luxations which have existed for more than fifteen days, but have not passed beyond the general limits assigned by authors to irreducibility; these M. Poinsot would call intermediary; 3. *old* luxations, being such as have passed beyond these general limits. In cases of the first class—that of *recent* luxations—the indications for operative interference must be very limited. The works of Bigelow on luxations at the hip, of Kocher on those at the shoulder, and of Farabœuf on those of the thumb—the most exposed amongst articular displacements to irreducibility—have shown that the obstacle to reduction is formed almost exclusively by a certain portion of the capsular apparatus, and have made known the most rational and efficacious means for overcoming—or, rather, for turning—the difficulty. The number of rebellious forms of recent luxation have been much reduced, and operative intervention in this class is seldom permissible, save in cases of obstinate luxation at the ankle and of the thumb. M. Poinsot advocates tenotomy in the treatment of irreducible luxation at the ankle, and states that backward displacement of the thumb (if it resist attempts at reduction by over-extension or by circumduction) may be justifiably treated by subcutaneous section. Arthrotomy and articular resection are quite out of the question in dealing with recent luxations. On the other hand, arthrotomy, followed or not by resection, is justifiable in certain of the so-called intermediary luxations; as, for instance, in cases of luxation at the shoulder when the limb is rendered powerless through compression of nerves; in cases of antero-posterior luxation at the

knee, with symptoms of vascular compression; and in cases of luxation of the thumb, where the free use of the hand is impeded. In every other instance of this second class of luxation, laying open the joint ought to be rejected. Even in the above-mentioned exceptional cases, in which operative intervention is permissible, arthrotomy should always be preceded by subcutaneous section of ligaments and tendons, and, if necessary, of adhesions. In cases of *old* luxations, as in those included in the two preceding classes, subcutaneous section (according to M. Poinsot) should occupy the first place. In dealing with the question whether—if reduction remain impossible after such sections—arthrotomy should be practised, a distinction, it is stated, ought to be made between ginglymoid articulations, which are formed in one segment by two bones, and enarthrodial articulations, in which there are but two opposing bones. In the former kind of articulation, as the elbow, the knee, and the ankle, arthrotomy seems to M. Poinsot to be the best mode of intervention. In an irreducible luxation of long standing of an enarthrodial joint, osteotomy is preferable to arthrotomy, which is to be regarded here as an useless and dangerous operation. An exception, however, is made in the case of irreducible luxation of the thumb, as here a serious and impeding deformity can be removed by resection alone.

2154. *Clark on the Immediate Suture of Divided Nerves.*—Mr. Henry E. Clark, surgeon to the Glasgow Royal Infirmary, reports in the *Glasgow Medical Journal* for October, five cases of immediate suture of nerves after division by injury. In all these cases the nerves were sutured by means of chromic acid catgut. The ligature transfixed the nerve in each instance, and did not connect merely the cut edges of the sheath; indeed, Mr. Clark states, in small nerves it is impossible to get accurate approximation without including in the ligature the whole substance of the nerve. The nerve-protoplasm, it is held, is not seriously interfered with by the passage through it of a fine needle, or by the presence of a substance so slightly irritating as antiseptic catgut. The results, in these cases, were necessarily best where suppuration did not occur. Antiseptic treatment, in so far as it increases the probability of early union and diminishes the risks of suppuration, materially aids in obtaining a favourable result; and so satisfied is Mr. Clark of the certainty of early union of the nerve under these conditions, that he would not hesitate to cut a nerve in the course of an operation, if found to be in the way, being sure that by careful suture satisfactory union could be obtained. A case is recorded in which the ulnar nerve was accidentally divided in an incision made over a diffuse aneurism of the ulnar artery. The divided nerve was sutured with fine chromic acid catgut; and when the patient was discharged, had completely recovered its sensory and motor power. The section of a nerve, however, it is pointed out, is generally followed by some degeneration of its structure. It is, therefore, necessary to guard against any premature conclusion as to the result of suture of the nerve in any instance, especially as it is found that after the continuity is restored, it takes a little time before the current of nerve-force passes freely, or the muscles respond readily to its stimulus. The operation of suture of nerves Mr. Clark believes to be perfectly harmless. In cases of wounded nerve, no new wound is produced in performing primary suture, and there is scarcely any addition to the gravity of the original injury. When the cut ends of a nerve have been separated by a considerable interval, either through retraction or loss of substance, the parts above and below may, without injury, be stretched to the extent of an inch or more. When the loss of substance is more considerable, transplantation of nerve, Mr. Clark suggests, might be tried. This has been successfully performed on chickens; but though, as far as he is aware, it has never been attempted in the human subject, he believes that it is quite practicable, and might be made use of in not a few cases now regarded as hopeless. Mr. Clark's object in bringing his cases before the profession is to insist on the necessity of immediate suture in all cases where the main nerves are divided. It is asserted that it should be as much a rule of practice to bring together the cut ends of a divided nerve as to stitch the wound in the muscles or skin. This article includes an able summary of the symptoms which may follow injury of nerves; and an useful list is given of contributions to surgical literature on the subject of suture of nerves.

2155. *Arnaud on Primary Tubercular Arthritis.*—Dr. F. Arnaud, of Marseilles, concludes with the following observations a contribution to the *Revue de Chirurgie*, No. 7, 1883, on primary tubercular arthritis, or tuberculosis of articular synovial membrane. 1. Tuberculosis of articular synovial membrane may be primary and independent of osseous lesions, or secondary (osteo-arthritis) and consecutive to the development of tubercle in the epiphyses. 2. Primary tuberculosis manifests itself in the synovial membrane under the two anatomical forms of grey granulation and microscopic elementary tubercle. The grey granulation is always accompanied by the elementary tubercle, but the latter may exist alone and independently of any appreciable tubercular lesion. 3. Synovial tubercles are to be found and studied especially in the tissue of fungous masses. They are to be observed also, even in the absence of fungoid degeneration, in fistulous tracts, in the walls of abscesses about joints, and wherever the neoplasm is capable of becoming developed by actual inoculation. 4. The tuberculous nature of a chronic arthritis may readily be overlooked if the naked-eye observation fail to be supplemented by microscopical examination. In order to establish the relative proportion of joint-affections of a tubercular nature, it would be well in all cases of arthritis, with or without osseous lesions, to make a complete anatomical and histological examination of the synovial membrane and of the tissues around the joint. 5. It is thought probable that future researches will demonstrate the tuberculous nature of many white swellings of soft parts and of many forms of chronic arthritis, whether fungoid or not in character, that have hitherto been attributed to scrofula, to rheumatism, or some other unknown cause. W. JOHNSON SMITH.

2156. *Küster on Arresting Hæmorrhage from the Vertebral Artery by Antiseptic Plugging.*—Professor Küster (*Berliner Klin. Wochensch.*, No. 48, 1883) writes to the following effect. Every surgeon is obliged to plug now and then, even at the present day, to stop a dangerous hæmorrhage. This is especially the case with the vertebral artery, of which about forty cases of wound of traumatic aneurism are recorded, with only three recoveries. This artery may be wounded either between the subclavian artery and the transverse process of the

sixth cervical vertebra, or in its course upwards between any two transverse processes. It can be, and has been, tied in the first case, but in the second case is practically out of reach; and most wounds occur here. The wound is often long and penetrating, with a small external opening, and the bleeding may be almost wholly internal, or a traumatic aneurism may result. The usual treatment has been by plugs soaked in perchloride of iron; and a fœtid suppuration has been the inevitable result. This has destroyed the thrombus, and caused secondary hæmorrhage; hence the necessity for an antiseptic plug. The earlier kinds of gauze, however (and notably carbolised gauze), are no longer aseptic after a day or so in the wound, and decomposition always follows. Iodoform gauze, on the contrary, insures us against decomposition for a much longer time. The case of a girl is given who had a 'cold' abscess in the neck, which, becoming painful, was incised, and a sequestrum was discovered in the transverse process of the axis. On removing this, a jet of arterial blood followed. The wound was at once plugged by the finger, and then by iodoform gauze, pushed between the transverse processes. A bandage secured the plug *in situ*. On removing the plug after ten days, it still smelt of iodoform, and the wound was free from inflammation. Meanwhile some severe symptoms had set in, connected with her original disease (gastric disease), viz., vomiting and diarrhœa, and some further symptoms which might be attributed possibly to the iodoform—yellow vision, disturbance of speech, and mental confusion. A perchloride of mercury gauze was therefore substituted, on which the condition improved, but the patient sank nineteen days after the operation from vomiting and diarrhœa. At the *post mortem* examination, peribronchitic cheesy foci were found, with ecchymoses of the stomach and duodenum, and hæmorrhagic infarctions in the kidneys. The wound was quite aseptic. The artery was found torn in the transverse process of the second cervical vertebra, but filled with a firm well-organised thrombus reaching several centimètres above and below. The plug had thus remained ten days without local disturbance, and this is ample time for a thrombus to organise sufficiently to do away with all fear of secondary hæmorrhage. Such a plug would be especially useful in wounds of the palm, especially on emergency, and would far supersede the plugging by perchloride of iron on lint. Wounds of large veins might be similarly treated.

E. J. Edwardes, M.D.

2157. *Zakharevitch on the Treatment of Fistula Ani.*—After a review of twenty-three cases of fistula ani operated during three years in Professor Grube's clinic, in Charkov, Dr. V. M. Zakharevitch (*Vratch*, 1882, No. 36) comes to the conclusion that as a rule the cutting operation must be performed. The use of the thermo-cautery must be limited only to those rare cases where the patients are extremely exhausted, and where even the slightest loss of blood must be avoided. The method of dividing the fistulous bridge by means of a stout silk ligature must be entirely discarded, since it is associated with prolonged reaction and suppuration. In the author's cases, the wounds made by the knife healed in eighteen days; those by the thermo-cautery, in twenty-seven; and those by the ligature, in thirty-five days.

2158. *Lindenbaum on Naphthalin in Frost-bite.*—Dr. V. Lindenbaum, of Jaroslavl (*Vratch*, 1883, No. 17), used naphthalin in nearly fifty cases of frost-bite, the toes and fingers being mostly the parts affected. In many cases extensive, freely suppurating, sloughing ulcers were present. The method after which the cases were treated was simple. First the affected parts were washed with a carbolic solution (3 to 5 per cent.); then they were covered with a thin layer of pure crystallised naphthalin (*naphthalinum albissimum*), over which a large piece of soft carbolic gauze was laid; then a few cakes of resinised tow followed; lastly, a thin sheet of waxed paper was placed, and the whole fixed and compressed by a starched gauze bandage, or, for the sake of cheapness, by narrow strips of adhesive plaister. The dressing was changed as a rule every seven or ten days, and only in cases of profuse suppuration every four days. Healing generally progressed very rapidly. The author never saw any untoward symptoms, except slight pricking pain during the first two or three hours after powdering, and slight hæmorrhages from granulations. Wounds ran their course without any rise of temperature.

2159. *Diakonoff on Naphthalin in the Treatment of Wounds.*—In the *Vratch*, 1882, No. 39, and 1883, No. 2, Dr. P. T. Diakonoff, of Orel Zemsky Hospital, publishes eighty cases of wounds, abscess-cavities, and ulcers, in which he used naphthalin as an antiseptic, in the form of medicated wool, gauze, or jute, or crystals, powder, ointment, or rods made of equal parts of the drug and gelatine or cacao butter. [A detailed description of Dr. Diakonoff's method may be found in a leader in the *British Medical Journal*, 1882, Vol. ii., No. 25, p. 1051.—*Rep.*] The results obtained by the author are decidedly favourable to the new antiseptic. The advantages claimed by him for naphthalin are its cheapness, harmlessness, and the ease of application. Of its drawbacks he mentions only two. 1. Naphthalin dressing in some cases gives rise to severe pain. 2. It does not prevent the appearance of erysipelas. The author never saw any formation of crusts, or occurrence of eczema, and other signs of local irritation, or hæmorrhage, after the use of naphthalin, of which Drs. Hoeftmann (*Centralbl. für Chirurgie*, 1882, No. 72), and Hager (*Ibid.*, No. 50), complain. [See also the papers on the same subject by Dr. G. R. Fowler, in the London Medical Record, July 1883, p. 277; and by Dr. C. Raimondi, *Ibid.*, Nov., p. 465.—*Rep.*]

2160. *Zakharevitch on Two Cases of Death after Extraction of Teeth.*—In the *Vratch*, 1882, No. 34, p. 563, Dr. V. M. Zakharevitch details the cases of two strong and generally healthy medical men, aged 26 and 24, who died, one on the sixth, and the other on the tenth day after extraction of teeth. In each of the patients the left inferior second molar tooth was removed. In one of the cases, osteomyelitis, and in the other, osteitis and periostitis, of the lower jaw developed, all the symptoms being unusually severe. The author believes that the inflammation from its onset was of a septic character, the wound being septically poisoned by the dentists having employed unclean instruments. In view of these two exceedingly sad cases, Dr. Zakharevitch strongly insists on the necessity of strict antiseptic precautions in tooth-extraction. He makes his patients, before the operation, carefully cleanse their teeth by means of a brush with plenty of soap, and wash out the mouth with 1 or 2 per cent. carbolic solution. The carbolic washing is repeated after extraction. When the bleeding is

arrested, he powders the wounded alveolus with iodoform, puts into its cavity a small plug of wadding, sprinkled also with iodoform, and seals the socket with collodium. All the instruments employed are disinfected both before and after the operation.

2161. *Kitaevsky on a Case of Gastrostomy in Cancerous Stricture of the Œsophagus.*—In the *Vratch*, 1882, Nos. 37 and 39, may be found an article by the late Dr. Kitaevsky (who recently committed suicide from poverty) on the subject of gastrostomy, and on a case operated on by the author. The patient, a woman aged 47, suffered from an impermeable malignant stricture, situated in the lower part of the œsophagus, and was operated upon nine months after the appearance of the first symptoms. Gastrostomy was performed after the rules laid down by Fenger and Howse, the stomach being opened, and a large drainage-tube introduced, on the sixth day after the first stage of the operation. The wounds, treated by carbolic solution and iodoform powder, ran a favourable course. In five days the patient, fed through the fistula four times a day, got up and walked about the ward. For eight days she went on well, gaining in weight and feeling comfortable and cheerful. Then she began to lose in weight and to grow weak and drowsy. On the twenty-fifth day after the operation, she somewhat suddenly died. The *post mortem* examination showed, beside an impassable stricture of the lowest twelve centimètres of the œsophagus, cancerous deposits in the wall of the left ventricle, in the mediastinal cellular tissue, and in the pancreas.

2162. *Zakharevitch on a Case of Incarcerated Hernia cured by Large Enemata.*—In the *Vratch*, 1882, No. 36, p. 602, Dr. V. M. Zakharevitch records a case of strangulated femoral hernia in a man, in which, after manipulations had failed, he injected two enemata, one after another, each of about twenty glasses of water. Shortly a copious discharge of fæces followed, and a few hours later the hernia underwent self-reduction. V. IDELSON, M.D.

2163. *Treves on the Direct Treatment of Spinal Caries by Operation.*—Mr. Fred. Treves, in a paper read before the Royal Medical and Chirurgical Society (*Brit. Med. Jour.*, Jan. 1884, p. 58), proposes an operation, by which the anterior surfaces of the bodies of all the lumbar vertebræ, and also some of the dorsal, could be reached from the loin; so that, in cases of spinal caries, the morbid products, arising from the diseased bone, could be prevented from travelling a long distance before an incision is made to evacuate them. A vertical incision near the outer edge of the erector spinæ, through the sheath of that muscle and the quadratus lumborum, then through the psoas muscle, will reach the bodies of the vertebra, so that they can be examined, and carious or necrosed bone removed, as well as affording direct exit to all morbid products. The author detailed three cases in which he had performed this operation with good results. A long discussion followed the reading of the paper, in which Mr. Furneaux Jordan and Mr. Noble Smith advocated mechanical fixing of the spine, a practice strongly protested against by the author.

2164. *Whitehead on a Case of Spina Bifida in a Woman, aged 28, Cured by Operation.*—Mr. W. Whitehead (*Brit. Med. Jour.*, Jan. 1884, p. 165) records the case of a woman, 28 years of age, who suffered from a tumour commencing three inches above the iliac crest, and extending within an inch of the tip of the coccyx; its circumference being twenty-two inches, with a transverse diameter of fourteen inches. After five weeks' observation the tumour was tapped; and whilst the sac was flabby the finger could detect, the skin being invaginated, a triangular opening into the spinal canal through the last lumbar vertebra. The evacuation of the tumour was followed by violent cerebral symptoms, which grew so alarming that at length it was decided to apply the cautery freely to the entire surface of the tumour, followed by a free application of collodion. In two days the alarming symptoms had all gone. Ten days later, the entire tumour was laid open by a single incision from the top to the bottom; pus was evacuated, and the cavity loosely packed with iodoform gauze. It healed well, and two months later the patient was well.

2165. *Studdert on Gangrene of the Arm, following Injury to Thumb: Death.*—Dr. Studdert, in the *Brit. Med. Jour.*, Dec. 1883, p. 1235, records the case of a man, aged 53, who played a game of bowls, and on the following morning noticed a small blister at the extremity of the right thumb, which, he thought, must have been occasioned in some way during the progress of the game. Two days after the injury he consulted Dr. Studdert. There was then a small punctured wound at the top of the thumb, from which oozed an ichorous discharge. There was no inflammation of the arm, nor any constitutional disturbance. On the fourth day the patient felt ill, and spent a sleepless night. On the fifth day the arm became enormously œdematous, and there was severe pain. The temperature was 101°·8 F. Free incisions were made in the arm, after which the limb went down; the temperature fell to 99°, and all pain had ceased. On the sixth day the swelling had returned somewhat, and by the evening the limb had become gangrenous. Amputation at the shoulder-joint was decided against, and the patient died during the night. [Were not the symptoms due to injury of some of the large blood-vessels, and subsequent occlusion?—*Rep.*]

2166. *Rand on a Means of Ascertaining the Course of the Small Bowel in the Operation of Abdominal Section.*—Mr. F. Rand, in the *Brit. Med. Jour.*, Dec. 1883, p. 1235, describes a means of ascertaining whether one is passing upwards or downwards along the intestine during an operation for internal intestinal obstruction. If the piece of bowel which presents at the abdominal wound be held in a line with the body, and the bowel be in its true direction—*i.e.* the apparently upper end be really so—the hand, passed along the side of the bowel, and backwards towards the spine, will be guided by the mesentery to the same side of the spinal column. But should the apparently upper end be not really so, the hand passed along the side of the bowel will be guided over to the opposite side of the column.

2167. *Jones on a Case of Suppurating Hydatid of Abdomen; Free Incision; Recovery.*—Mr. Jones, in the *Lancet*, Dec. 1883, p. 1041, reports the case of a youth, aged 14, who, in Aug. 1881, had paracentesis performed in two places in the linea alba below the umbilicus, evacuating four quarts and a half of thick creamy pus. After this all symptoms had disappeared. In April 1883 the abdomen again began to distend, without tenderness. In May, about three quarts of creamy pus were removed by a large trocar. In June an incision was made, an inch and a half in length, in the linea alba, an inch below the umbilicus. A large quantity of pus, hydatid fluid, and cysts was expelled. The cavity was washed out with

a weak solution of carbolic acid, and a large-sized drainage-tube inserted. Notwithstanding an attack of scarlet fever, the patient was able to move about six weeks after the operation, and eventually became a strong, healthy-looking lad.

2168. *Bond on the Treatment of Paraphimosis.*—Mr. C. J. Bond, in the *Lancet*, Dec. 1883, p. 1108, describes a method of reducing a paraphimosis when there is considerable swelling. Gently push the glans on one side and draw the skin of the penis a little back, in order to see the ring of prepuce which forms the constricting band; nip this firmly between the thumb-nail and finger-nail of each hand on each side of the glans; roll or evert it, as it were, a little over the end of the finger-nail, thus dilating the ring, and then gradually and firmly draw this band forwards. It will be found that the prepuce can be drawn over almost any glans, the involuntary recoil of the patient helping to complete the reduction.

2169. *Chavasse on a Method of Opening Psoas Abscesses.*—Dr. T. F. Chavasse, in the *Lancet*, Dec. 1883, p. 1119, describes a method of treating psoas abscesses. The operation is described as follows. An incision is made immediately above the iliac crest, commencing at the edge of the erector spinæ muscle, and carried transversely outwards for four inches towards the anterior superior spine. The structures are divided as in colotomy, until the anterior edge of the quadratus lumborum is reached. The forefinger is then passed downwards and forwards on the iliacus, until the tense and distended psoas-sheath is detected. A scapel introduced by the side of the finger is now plunged into the sac, and the incision enlarged by a pair of dressing-forceps. Drainage-tubes are inserted into the wound, and left there as long as necessary. Notes are given of two cases treated by this method. The advantage of this proceeding is said to be efficient drainage, close to the diseased bone, through an orifice removed from the septic influence of the genital organs. Mr. Chiene, of Edinburgh, was the first to adopt this method.

2170. *Le Page on the Evacuation of Deep Abscesses.*—Mr. Le Page, in the *Brit. Med. Jour.*, Dec. 1883, p. 1232, advocates the expediency of thrusting a director instead of a knife through the tissues into a deep-seated abscess, and then enlarging the opening with a pair of forceps. The author has had an instrument made for him by Messrs. Arnold and Sons, for the evacuation of these abscesses. It is composed of two blades, which can be separated by turning a thumb-screw, so that the instrument acts as a director and pair of forceps combined. This deep abscess-evacuator, when used with caution, converts a dangerous operation into one of great simplicity and of perfect safety. [To the late Mr. Hilton, in 1860 (vide *Medical Digest*, sect. 171 : 1) is due the introduction of this method for opening deep abscesses.]

2171. *Bell on a New Method of Exposing the Knee-joint in order to Remove Pulpy Degeneration of the Synovial Membrane.*—Mr. Royes Bell, in the *Lancet*, Dec. 1883, p. 1041, reports the case of a man, aged 27, who was suffering from disease of the right knee-joint. After some months' rest on a back-splint without any relief, it was decided to make a transverse incision across the joint; the patella was then sawn in two, and the thickened synovial membrane removed from the interior of the joint, together with the semilunar cartilages. The sawn patella was brought together by a silver wire suture, and the wound closed; antiseptic dressings were applied, and the joint placed in a back-splint (McIntyre's). The patient progressed favourably for about three months and a half, but going out one day he got tipsy. After this the startings in the limb returned, when it was decided to excise the joint. This was done, and the patient has at the present moment a straight firm ankylosed knee-joint, with but very little shortening of the limb. RICHARD NEALE, M.D.

2172. *Weiss on Primary Extirpation of the Astragalus in Cases of Irreducible Dislocation.*—In a lecture published by the *Revue Méd. de l'Est*, for Feb. 1884, the author strongly advises to perform the operation at once when the bone cannot be reduced. The absence of an external wound is no contra-indication, as the mortality, which was estimated at 27 per cent. by Broca, has been lessened very materially by the introduction of the antiseptic treatment. In the author's own case (a simple irreducible dislocation outwards, with much inversion of the foot) the operation was difficult, and the wound did not heal for a long time; but after a few months the patient began to walk, and the result appeared to be quite satisfactory.

2173. *Cauchois on Regeneration of Bone after Excision of the Elbow-joint.*—Excision of the right elbow-joint had been performed on a woman, aged 44, in consequence of chronic osteo-arthritis; a complete cure was anticipated, when inflammation recurred and amputation became necessary. The condition of the parts eight months after excision is thus described by the author (*Jour. de Méd.*, Feb. 1884). The inferior extremity of the humerus was rounded, and presented on the outer side a small eminence which was connected by a fibrous band to the ulna. The upper end of the radius was rounded; that of the ulna was prolonged into a well-marked olecranon process, and the coronoid process was represented by a small bony projection. The three bones were united together by firm fibrous tissue, but there was no trace of cartilage or of synovial membrane.

2174. *Mollière on Extirpation of Benign Tumours of the Breast situated above the Nipple.*—The author has described at the Société des Sciences Médicales de Lyon his method, by which the disadvantage of an ugly scar is avoided. He makes a transverse incision in the submammary fold, cuts his way through the subglandular tissue, and reaches the tumour between the gland and the pectoral muscle. In a case shown to the members of the society no trace of the operation could be seen, as the scar was entirely hidden by the breast, which had preserved its normal shape and appearance.

J. S. KAESER, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

2175. RIGGI, G.—Contributions to the Study of Paraldehyde.—(*Gazz. Med. Ital. Lombardia*, Dec. 1883; Jan. 5, 12, 19, 1884.)

2176. DE GIOVANNI, PROFESSOR.—Pepsin and the Peptones in the Treatment of Diabetes. (*Gazz. Med. Ital. Prov. Venete*, Jan. 12, 1884.)

2177. QUEIROLO.—On the Hypodermic Administration of Kairin. (*Gazzetta degli Ospitali.*)

2178. DE DOMINICIS.—Effects of Pilocarpine in Peritonitis, in relation to the Re-absorption of the Exudation. (*Giorn. Inter. delle Sci. Med.*, January 1884.)

2179. GRETCHIKHIN, A.—On the Action of Carbolic Acid in Pyrexia. (*Kavkazsky Meditzinsky Sbornik* [= *Caucasian Medical Archives*], 1883, No. 37, pp. 78–86.)

2180. GAUDELIN.—On Relapsing Fever. (*Kavkazsky Med. Sbornik*, 1883, No. 36.)

2181. LVOFF, T. M.—On Permanganate of Potash in Amenorrhœa. (*Meditzinsky Vestnik*, 1883, No. 43.)

2182. ZASETZKY, N. A.—On the Pharmacological Action of Kairin. (*Vratch*, No. 27, 1883, p. 417.)

2183. KNABE, P. J.—Remarks on the Antipyretic Action of Kairin. (*Meditzinsky Vestnik*, No. 22, 1883.)

2184. JUK, N.—On Kairin as an Antipyretic. (*Meditz. Vestnik*, 1883, No. 28.)

2185. OSTAPENKO, A. P.—On Kairin as an Antipyretic. (*Meditz. Vestnik*, 1883, Nos. 28–42.)

2186. LOMISKOVSKY, M.—On the Treatment of Pharyngitis Sicca. (*Vratch*, 1883, No. 33, p. 554.)

2187. NIKOLSKY. — Iodoform as an Anthelmintic. (*Russkaia Meditzina*, 1883, No. 1, p. 15.)

2188. COONEY.—Vesical Injections in Cholera. (*Lancet*, Nov. 1883, p. 834.)

2189. DEAKIN.—Unusual Symptoms following the Application of Unguentum Hydrargyri Ammoniati. (*Brit. Med. Jour.*, Dec. 1883, p. 1281.)

2190. Hot Milk as a Restorative. (*Med. Times and Gaz.*, Dec. 1883, p. 698.)

2191. HUDSON.—Bromide and Iodide of Potassium. (*Lancet*, Dec., p. 1083.)

2192. YEO.—Phthisis treated by Antiseptic Inhalations. (*Brit. Med. Jour.*, Jan. 1884, p. 43.)

2193. ATKINSON.—The Treatment of Habitual Constipation. (*Practitioner*, Jan. 1884, p. 38.)

2194. STRETTON.—Humane Blistering. (*Brit. Med. Jour.*, Jan. 1884, p. 162.)

2195. DYSON.—Rest as a Therapeutic Agent. (*Brit. Med. Jour.*, Jan. 1884, p. 64.)

2196. KINGSBURY.—Persistent Hiccough treated by Chloral. (*Brit. Med. Jour.*, Jan. 1884, p. 103.)

2197. ALLAN.—The Treatment of Violent Delirium in Fever Cases. (*Lancet*, Dec. 1883, p. 1039.)

2198. KENNEDY.—Salicylate of Sodium. (*Med. Times and Gaz.*, Dec. 1883, p. 722.)

2199. RANSOME.—The Influence of Iodoform on the Body-weight in Phthisis. (*Brit. Med. Jour.*, Jan. 1884, p. 8.)

2200. MURRELL.—Treatment of the Night-Sweating of Phthisis by Physostigma and Eserine. (*Practitioner*, Dec. 1883.)

2201. VERRALL.—Iodide of Potassium as an Antigalactagogue. (*Brit. Med. Jour.*, Jan. 1884, p. 9.)

2202. SEIFERT. — On Agaricine. (*Progrès Méd.*, Jan. 26.)

2203. MONCORVO.—The Treatment of Whooping-Cough by Resorcine. (*Bull. de l'Acad. de Méd.*, Jan. 22.)

2204. MOLESCHOTT.—The Treatment of Diabetes by Iodoform. (*Paris Méd.*, Jan. 5, 1884.)

2205. FOURIER.—Lobelia Inflata. (*Conc. Méd.*, Feb. 1884.)

2206. PUSINELLI.—Cannabin Tannate as a Hypnotic. (*Berliner Klin. Wochensch.*, 1884, No. 1.)

2207. SAMUEL.—Subcutaneous Injection of Water in Cholera. (*Deutsche Med. Wochensch.*, Nov. 14.)

2208. HÜLLMANN.—Chlorate of Potash. (*Deutsche Med. Wochensch.*, Nov. 14.)

2209. Radix Gossypii as a Substitute for Ergot. (*Wiener Med. Blätter*, Oct. 1883.)

2210. QUINQUAUD.—The Action of Arsenic upon Diabetes. (*Bull. Gén. de Thérap.*)

2211. MAZZARA. — A Compound of Quinine with Chloral. (*L'Orosi*, and *Birmingham Med. Jour.*)

2212. RUNEBERG.—Sudden Death after Hypodermic Injection of Morphia in Angina Pectoris. (*Finska Läkaresällsk. Handl.*, Vol. xxiv.)

ART. 2175. *Riggi on Paraldehyde.*—Dr. Riggi, resident medical officer of the Provincial Asylum of Milan, publishes in the *Gazz. Med. Ital. Lomb.* of December and January a series of twenty-eight cases in which he tried paraldehyde. He thinks highly of it both as a hypnotic and as an anæsthetic in the various forms of mental alienation. It only occasionally failed to procure sleep, and then because the dose given was not sufficient. In almost all cases, quiet restorative sleep followed its administration; even after two months or more of its use, in large doses, it never caused headache, vomiting, or gastric disturbance. Even in cerebral congestion it may be given with profit; in one case of maniacal excitement, with disease of the heart, in doses of one drachm, though it failed to delay the excitement, it quieted the heart's action, and improved the general state of the patient. It succeeded in some cases where chloral and hyoscyamine were useless. In cases attended by much pain, cerebral tumour, &c., it gave great relief, and was markedly better than chloral. Hallucinations were often suspended during its administration. In epilepsy, it is often as useful as bromide of potassium. In the forms of mental alienation with excitement, the good effect of paraldehyde is manifest; in the periods of tranquillity and in the depressed melancholic forms, its action is less evident. After a dose of paraldehyde, the temperature falls some tenths of a degree; the pulse also becomes somewhat slower. It is perceptible in the breath for some hours; in those taking it constantly, it continues to be thus exhaled for twenty-four hours. Patients often increase in weight while taking paraldehyde; and the administration of the drug never had to be suspended, as morphia has to be, from the occurrence of vomiting and other unpleasant symptoms. Dr. Riggi concludes that paraldehyde is indicated in the treatment of mental alienations; that it is a hypnotic and anæsthetic. It is especially indicated in states of maniacal excitement. In doses of three to five grammes it is well borne; above five grammes, it may be dangerous. It appears to be useful in the frenzy of leprosy and epilepsy. It is not a specific in any form of mental alienation; but, by its indirect action as a hypnotic and anæsthetic, it is extremely useful in the treatment of many mental diseases.

2176. *De Giovanni on Pepsin and the Peptones in the Treatment of Diabetes.*—Professor De Giovanni (*Gazz. Med. Ital. Prov. Venete*, Jan. 12, 1884) draws attention to the frequent utility of pepsin and peptones in the treatment of diabetes. He cites the following case. A young man, aged 20, was admitted, and gradually submitted to an exclusively meat diet and lactic acid. Even when all milk, starchy, and saccharine matter were entirely omitted, the urine was as abundant as before, and the quantity of sugar the same, and the patient did not become stronger. The thought occurred to Dr. De Giovanni that all the meat and eggs taken were not utilised in the organism. The bodily strength was not in proportion to the force of the foods, neither was the quantity of urea in the urine. The examination of the fæces showed a large quantity of meat, unaltered and scarcely masticated. The patient was then placed on ordinary diet, but with a certain quantity of pepsin and peptones, prepared according to the method of Professor Lussana. (The stomach of a calf is cut in pieces, and placed in a litre of dry white wine; after eight days filtered; the filtrate contains pepsin and peptones.) The patient quickly began to improve in general nutrition, and was able to get

up; the quantity of sugar and of urine was lessened. On returning to the meat-diet the patient again became worse, and was again better on the substitution of the mixed diet, with pepsin and peptones. Continuing this diet, he so far recovered as to be able to leave the hospital, and a year afterwards, though diabetic still, was in fair health. Professor De Giovanni has found equal benefit in other cases from the same treatment, but not in all. He concludes that pepsin and the peptones (Lussana) constitute an element useful in completing the diet of the diabetic, when defective gastric function helps to exaggerate the effects of the disease on the general health.

2177. *Queirolo on the Hypodermic Administration of Kairin.*—In an article in the *Gazzetta degli Ospitali*, Dr. Queirolo sums up as follows. 1. The injection of 10 centigrammes of kairin causes a fall of febrile temperature of a few tenths of a degree (centigrade), which disappears in the course of an hour. 2. The injection of 20 centigrammes causes a fall which may amount to seven-tenths of a degree, and which commences within half-an-hour and disappears in about two hours. 3. The injection of 30 centigrammes produces a fall which oscillates between a few tenths and a degree and a half centigrade; it commences within half an hour and disappears in two hours. Often, however, these doses fail completely, and give rise only to insignificant and fugitive effects. 4. The injection of 50 centigrammes causes a fall of from 1°, 2°, or even 4° C.; the fall begins very quickly, and is dissipated in two or three hours. 5. The injection of 1 gramme has given a fall varying between 2°·7 and 3°·3 C. On one occasion the fall was 5° (from 40°·5 to 35°·5). The fall commences very quickly, reaches its highest point in two hours, and is dissipated in five hours and a half. The pulse is depressed in proportion to the descent of the temperature. He concludes that kairin administered hypodermically produces more rapid, more lasting, and greater falls of temperature than when given by the mouth. Much smaller doses too are required. This method of administration is free from inconvenience, local or general.

2178. *De Dominicis on Effects of Pilocarpine in Peritonitis, in relation to the Re-absorption of the Exudation.*—An experience of several years induces the author to believe that great benefit may be obtained, not only in pleurisy and pleuro-pneumonia, but also in peritonitis, from the use of pilocarpine, rapid re-absorption of the exudation, even when copious, taking place. The author gives shortly the history of some of his cases of both chronic and acute peritonitis, in which the administration of jaborandi or of pilocarpine (by hypodermic injection) was followed by rapid recovery. When the effect was not obtained, it was due to some special complication of the disease. In the course of these experiments in treatment the author made careful observations on the mode of action of the drug, from which he arrives at the following conclusions. 1. The systolic force of the heart, except during the stage of sweating, is increased rather than lessened, unless the nutrition of the myocardium is interfered with. 2. The effects on the sudoriparous glands endure after the repeated administration of the drug. 3. Caffein and quinine moderate the action of pilocarpine.

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2179. *Gretchikhin on the Action of Carbolic Acid in Fever.*—In the *Kavkazsky Meditzinsky Sbornik*, 1883, No. 37, pp. 78–86, Dr. A. Gretchikhin, of Kars, states his experience in the treatment of various febrile diseases by enemata, made of from 8 to 16 grains of carbolic acid to two or four ounces of water at 38° R. (108° F.), and administered when the patient's temperature reached 39°·5 C. (103°·1 F.). His observations were made on thirty patients, seventeen of whom suffered from enteric fever, nine from petechial typhus, three from croupous pneumonia, and one from facial erysipelas. The number of enemata administered to individual patients varied from three to twenty (during the whole course of the case). All thirty patients, taken together, received 250 carbolic injections. Dr. Gretchikhin summarises his results as follows. 1. The administration of an enema invariably leads, in ten or twenty minutes, to reduction of temperature, which gradually reaches its maximum within two or three hours; then the temperature usually begins to rise again, pretty soon arriving at, or even transgressing, the level at which it stood before the enema. 2. As a rule, the temperature falls several degrees (3° or 3°·5 C. = 5°·4 or 6°·4 F.) In some patients, however, especially in the beginning of a febrile disease, the fall is far less considerable (0°·5 to 1° C.). 3. Simultaneously with the decrease of temperature there appears profuse perspiration. 4. The pulse and respiration are reduced in strict parallelism to the fall of temperature (*e.g.* the respiration falls from 42 to 36 or 28 per minute, and the pulse from 120 to 90 or 70). At the same time the respiration becomes deeper, and the pulse softer and fuller. 5. The above-mentioned effects of carbolic acid usually last from two to four hours, after which everything returns to the former condition. However, in several cases of typhus fever and croupous pneumonia, the author saw a definitive fall of the temperature, followed by convalescence (after the administration of two or three carbolic enemata). 6. In a certain proportion of the cases, the rise of temperature following its depression by enemata is accompanied by rigors and constriction of the peripheric vessels (compressed, hard, radial pulse, pallor, and even slight cyanotic discoloration of the face and extremities). These phenomena usually are of short duration, and disappear when the temperature reaches its former height. 7. No other unfavourable effects of carbolic enemata, such as cachexy, pulmonary congestion, &c., were observed by the author. On the contrary, the decrease of temperature and appearance of perspiration markedly, though only temporarily, relieved headache and other subjective signs. 8. The urine remained free from albumen, and did not present any changes in colour, specific gravity, &c. 9. Similarly, the author never saw any unfavourable or irritating local action of carbolic enemata on the rectal mucous membrane. 10. The dose must not surpass 16 grains. In many cases, full antipyretic and other effects are developed from smaller doses, from 12 or even 8 grains of phenol. As to the administration of carbolic acid by the mouth, the author, from some experiments on himself and several patients, arrived at the conclusion that this method [recommended by Warren (the *Med. Press*, 1882, Jan. 11), Chapell, Roth (the London Medical Record, 1880, Aug., p. 306), H. Weeks (*Ibid.*, 1880, April, p. 141), T. Hunt (*Ibid.*, 1880, July, p. 272), C. E. Shelly (*Ibid.*, 1881, May, p. 194), Gaudelin (*Kavkazsky Med. Sbornik*, 1883, No. 36) and others] is almost impracticable, since even strongly diluted solutions (*e.g.* Roth's mixture, *l.c.*)

produce gastric symptoms, such as epigastric pain, sickness, and even vomiting. Besides, it does not act so rapidly and effectively, as carbolic enemata do. [In the *Proceedings of the Caucasian Med. Society*, 1883, No. 9, p. 254, Dr. Kh. Lisitzeff states that he also saw favourable results from the treatment of enteric fever by carbolic enemata. See also papers on the same subject by Van Oye, in the LONDON MEDICAL RECORD, April 1882, p. 136; Morra and Ghirardi, *Ibid.*, July, p. 270, and Ferraud, *Ibid.*, p. 271.—*Rep.*]

2180. *Gaudelin on the Use of Carbolic Acid in Relapsing Fever.*—Following the example of Dr. Rothe, of Altenburg, who successfully used carbolic acid in enteric fever (see LONDON MEDICAL RECORD, August 1880, p. 306), Dr. Gaudelin, of Tiflis (*Kavk. Med. Sbornik*, 1883, No. 36) administered in eighteen cases of relapsing fever the following mixture. ℞ Acidi carbol. crystal. gr. xij., aquæ menthæ piper. ʒj., tinct. iodi ʒss., syrupi simpl. ʒj. M. A tablespoonful every two hours. The patients took about twelve grains of carbolic acid daily, the administration being continued two or three weeks. No awkward symptoms were observed. As contra-indications to the carbolic treatment, the author regarded collapse, anorexia, catarrh of the stomach with dry tongue, and the patient's utter disgust for the drug. Of eighteen cases, in nine no relapse followed; in six the second attacks were very short, lasting from two (*sic*) to thirty-six hours; in one case the relapse lasted only two days, in one two and a half, and in one four days.

2181. *Lvoff on Permanganate of Potash in Amenorrhœa.*—The paper by Professors Sydney Ringer and W. Murrell (see the LONDON MEDICAL RECORD, April 1883, p. 147) induced Dr. T. M. Lvoff (*Meditz. Vestnik*, 1883, No. 43) to try permanganate of potash in ten cases of amenorrhœa. He administered pills (℞ Potassæ hypermang. ʒj., extracti pulsatillæ q. s. ut fiant pilulæ 50; two pills three or four times daily) for ten days immediately preceding the expected period or during the latter. In seven cases the action of manganese proved highly successful; in the remaining three it utterly failed.

2182. *Zasetzky on Kairin.*—In the *Vratch*, No. 27, 1883, p. 417, Dr. N. A. Zasetzky, of Professor V. A. Manassëin's clinic, gives the results of his observations on the influence of kairin upon temperature, pulse, nitrogen-metamorphosis, elimination of phosphorus, and assimilation of nitrogenous ingredients of milk, in a patient with exanthematic typhus. He found the following results. 1. Kairin acted as a very reliable antipyretic, since a few half-gramme doses reduced the temperature from a high febrile level to the normal at which it could be kept by the further administration of the drug. 2. Simultaneously with the reduction of temperature, the pulse became less frequent. 3. Nitrogenous metamorphosis, as well as excretion of phosphorus, was markedly decreased. 4. The assimilation of the nitrogenous ingredients of milk did not present any pronounced changes (a slight increase was observed). 5. The urine on the days when kairin was used was of a dark yellow colour, with a greenish tint. 6. There was no marked alteration in the daily amount of urine. 7. The fall of temperature occurred without any perspiration; the rise (on the withdrawal of kairin) without rigors. 8. No disagreeable symptoms from the use of kairin were observed.

2183. *Knabe on the Antipyretic Action of Kairin.*—Dr. P. S. Knabe (*Meditzinsky Vestnik*, No. 22, 1883) details two cases of relapsing fever and two of pulmonary phthisis in which he administered kairin in doses of from three to eight grains every two hours. Small doses (under five grains) produced a slight fall in the frequency of pulse (from two to eight beats), and as slight a reduction of temperature without the occurrence of perspiration. Larger doses (eight grains) induced a more considerable decrease in the frequency of pulse (from twelve to thirty beats), relieved headache, and considerably lowered temperature, especially in the phthisical patients, the reduction being associated with a profuse perspiration. In two or three hours there followed a rise of temperature, accompanied by rigor. In the phthisical patients, no unpleasant effects were observed. In the patients with recurrent fever, the administration of kairin was followed by tinnitus, soreness, and feeling of constriction in the throat.

2184. *Juk on Kairin as an Antipyretic.*—Dr. N. Juk (*Meditz. Vestnik*, 1883, No. 28) used kairin, in doses of 8 to 12 grains, in two cases of phthisis and in one of intermittent fever. In the latter the drug utterly failed, the case being subsequently cured by quinine. In the phthisical patients, kairin brought about only a slight reduction of the temperature (0°·5 C.), invariably accompanied by profuse exhausting. The re-elevation of temperature was ushered in by a violent rigor.

2185. *Ostapenko on Kairin as an Antipyretic.*—Dr. A. P. Ostapenko (*Meditz. Vestnik*, 1883, Nos. 28–42) has made numerous experiments on the action of kairin in febrile and in healthy dogs. In one group of febrile animals, kairin was administered in doses of 1 gramme, twice daily (morning and evening). The following results were obtained. 1. In dogs in which a febrile state was induced by the introduction of septic matters, the administration of the drug was followed, in from twenty to forty minutes, by a fall of the temperature at the rate of 1°·3 C. to 2°·7 C., the reduction lasting from two to four and a half hours, and then giving place to a new rise. 2. In animals affected with fever from the presence in them of artificially produced inflammatory foci, kairin acted much less markedly, the reduction of temperature varying from 0°·3 C. to 0°·7 C., and lasting from thirty minutes to two hours. In a second group of experiments, febrile dogs received half-gramme doses twice daily. In the animals with septic fever, the temperature fell 0°·2 to 1°·4 C., the fall occurring in half an hour to an hour and a half, and lasting from half an hour to one hour and a half. In animals with inflammatory foci, kairin again acted comparatively much less strongly, the reduction being not more than 0°·2 to 0°·5 C., and of short duration. A third group of the febrile animals took half-gramme doses in short intervals. The reduction of temperature was from 0°·5 to 0°·7 C. The administration of half-gramme doses every half hour or hour and a half made the temperature descend nearly 3° C., but the fall was accompanied by toxic symptoms. In a fourth series of experiments, kairin was given to healthy (non-febrile) dogs. Even one-gramme doses did not exert any influence on the temperature.

2186. *Lomiskovsky on the Treatment of Pharyngitis Sicca.*—On the ground of his experience in Professor V. G. Lashkevitch's clinic, in Charkov, Dr. M. Lomiskovsky (*Vratch*, 1883, No. 33) states that, in cases of chronic dry pharyngitis, the best results

are obtained from painting the posterior wall of the pharynx with iodine dissolved in glycerine, and from washing out the nasal cavity (through choanæ by means of a curved syringe) with the following solution :—℞ Infusi chamomil. (anthemidis) ℥vj., sodæ bicarb. ℥j., acidi carbolici gtt. iij. He recommends, also, the employment of the interrupted electric current.

2187. *Nikolsky on Iodoform as an Anthelmintic.*—In the *Russkaia Meditzina*, No. 1, 1883, p. 15, Dr. Nikolsky states his experience in twenty-three cases of helminthiasis treated by iodoform. In four patients, tænia solium was present; in eighteen, ascarides; and in one, tænia and ascarides existed simultaneously. The ages of the patients varied from 2 to 70 years. Iodoform was given in powder, from a third of a grain to 3 grains, four or six times a day, in conjunction with bicarbonate of soda or rhubarb. In nine of the patients the results of the treatment remained unknown; in eleven, no discharge of the worms was observed. The drug proved successful only in two cases, in that of a boy, aged 10, with tænia and ascarides, and in another boy, aged 6, with tænia alone. In the former, the worms were expelled by six half-grain doses, in the latter by two. From these facts the author came to the conclusion that iodoform is but a very inefficient anthelmintic remedy, and, accordingly, gave up its further administration. He recognises, however, that sickness, vomiting, salivation, and pressure in the epigastric region invariably disappear after a dose, for a more or less prolonged stretch of time. [Iodoform was first recommended as an anthelmintic remedy by Professor Sim, in the *Med. and Surg. Reporter*, June 1881. He saw the discharge of tæniæ and ascarides after the administration of one-grain doses. His statement in regard to ascarides was shortly afterwards supported by Dr. Szydlowski's three successful cases in the *Vratch*, No. 41, 1882, p. 699, and by Dr. Makaroff's case, *ib.*, No. 1, 1883, p. 15.—*Rep.*] V. Idelson, M.D.

2188. *Cooney on Vesical Injections in Cholera.*—Mr. Cooney, in the *Lancet*, Nov. 1883, p. 834, draws attention to a paper by Mr. Purvis, which appeared in the *Lancet* of Oct. 20, entitled 'A New Method Proposed for the Treatment of Cholera.' Mr. Cooney remarks that, prior to this paper, he had communicated to the *Lancet* an unpublished paper with cases based upon the two primary pathological changes in cholera—viz., viscidity of the blood, and spasmodic contraction of arterioles and muscular structures, and suggested that the remedies most likely to counteract these changes were (1) the injection of watery or saline solutions into the urinary bladder, and (2) injections of chloral into the muscular tissues. In the *Lancet* of July 29, 1882, Mr. Cooney also draws attention to this method of treatment.

2189. *Deakin on Unusual Symptoms following Applications of Unguentum Hydrargyri Ammoniati.*—Mr. Shirley Deakin, in the *Brit. Med. Jour.*, Dec. 1883, p. 1281, gives the notes of two cases of chronic eczema, in which he prescribed an ointment containing thirty grains of hydrargyrum ammoniatum. In each instance the use of the ointment was quickly followed by an acute eczema, not only at the seat of the previous chronic attack, but more or less generally over the whole body. Examination proved that the preparation was pure.

2190. *Hot Milk as a Restorative.*—In the *Med. Times and Gaz.*, Dec. 1883, p. 698, a note appears on the use of hot milk as a restorative. When heated above 100° F., milk loses its sweetness and density, but has a most cordial influence over mind and body when exhausted by labour or mental strain. Its effects are more satisfying and more enduring than those of alcoholic stimulants.

2191. *Hudson on Bromide and Iodide of Sodium.*—Mr. T. J. Hudson, in the *Lancet*, Dec. 1883, p. 1081 contributes a paper, showing the therapeutic advantages of bromide and iodide of sodium over bromide and iodide of potassium. The potassium salt is not cumulative; it is a strong depressant, and has high diffusive power. The sodium salt is a non-depressant, and its diffusive power is less than that of the potassium salt. In America, bromide of sodium is more largely used than the potassic salt; and no 'bromism' nor any skin-eruption is produced by using the sodium salt. In pertussis, preference must be given to the potassium salt; but in women, approaching the menopause and suffering from the usual train of nervous symptoms, the sodium salt in half-drachm doses is better than the potassium salt. The author concludes his paper by remarking that the bromide and iodide of sodium are better than those of potassium, if we wish for the action of the bromine or iodine only on the system, but where we desire the depressing and sedative actions to co-operate, then the potassium salts are preferable. [Many observations bearing upon this subject may be consulted by reference to sections 253 : 1, and 269 : 6 of the *Medical Digest.*—*Rep.*]

2192. *Yeo on Phthisis Treated by Antiseptic Inhalations.*—Dr. Burney Yeo, in the *Brit. Med. Jour.*, Jan. 1884, p. 43, records the case of a girl, aged 13, who was kept under close observation for a year. At first she complained only of diarrhœa and constant abdominal pain, but after two or three months there were found marked signs of disease at the apex of the right lung. For three months the patient was treated with antiseptic inhalations, by means of the little respirator devised by the author. She gained in weight, and improved markedly during her stay in hospital; then she was sent to Dover for two months, returning almost well. The treatment consisted in the almost continuous use of an inhalation, at first of eucalyptol and spirits of chloroform; subsequently of creasote and spirits of chloroform. She also had a mixture containing two minims of creasote and two grains of quinine, with glycerine and mucilage, three times a day. [A glance at sect. 698 : 2 of the *Medical Digest* will show that in 1853 Dr. Inman, and in 1860 Dr. Morgan, attributed most striking results to the inhalation of creasote in phthisis.—*Rep.*]

2193. *Atkinson on the Treatment of Habitual Constipation.*—Dr. F. P. Atkinson, in the *Practitioner* Jan. 1884, p. 38, contributes a short but able article on habitual constipation. The reason why drugs often fail to relieve, is the fact that the subjects of this disorder (chiefly women) do not seem to know that regularity is essential to the due performance of each of nature's operations; they appoint no stated times for trying to relieve the bowels, but trust to receiving intimation when the rectal accumulation and distension can be borne no longer. This acts fairly well for a time, but soon medicines are resorted to, and they quickly cease to have any effect. As regards treatment, the first thing to be accomplished is to get the rectum well relieved; next, to get the actions to take place at fixed times; and, lastly, to obtain more tone in the intestinal muscular tissue. To carry out this plan, it is well to give ten grains

of compound colocynth and rhubarb pill at bed time (this rarely requires to be repeated), then to take a tumblerful of cold water every morning on waking. Should the bowels remain sluggish for some time, the same quantity of water may be taken daily before each meal. Supposing no action take place on rising or shortly after, a small injection of warm water may be resorted to. After each movement of the bowels a small hand-ball syringeful of cold water should be thrown into the rectum and retained. But, above all things, it is necessary for the patient to try to get relief at a certain fixed time every day.

2194. *Stretton on Humane Blistering.*—Mr. S. Stretton, in the *Brit. Med. Jour.*, Jan. 1884, p. 162, recommends the following method of blistering. The surface requiring such counter-irritation is to be well covered with annular blisters about the size of the human iris, cut from vesicating tissue with an ordinary gun-punch, the centre being extracted with a punch of small size. Once secure to the surface, and covered with cotton-wool and bandage, these blisters require no further attention. The discomfort created is so slight that there is never any resistance to their application.

2195. *Dyson on Rest as a Therapeutic Agent.*—Dr. Dyson (*Brit. Med. Jour.*, Jan. 1884, p. 64) describes some difficulties connected with the employment of rest as a therapeutic agent in medical cases. Reference is made as to the time a patient should be kept in bed after an acute febrile illness; also the importance of keeping albuminuric patients in bed, together with the extreme difficulty met with in enforcing rest and appropriate diet, is discussed. In patients over 80 years of age, suffering from slight chest-affections, in which there is shown great tendency to adynamic symptoms, the best plan is to employ free stimulation, and to keep the patient in the upright position as much as possible.

2196. *Kingsbury on Persistent Hiccough Treated by Chloral.*—Dr. Kingsbury, in the *Brit. Med. Jour.*, Jan. 1884, p. 103, records the case of a man, aged 50, who, whilst walking in the street, suddenly became giddy, and had to cling to a railing for support. With assistance he was brought home in a cab. During the night hiccough came on, and soon became very frequent. When he was first seen, the hiccough had been persistent for forty hours. All sorts of remedies and drugs were employed, without relief; morphia only produced sleep, during which the hiccough continued as before. At last, after twelve days' incessant suffering, 30 grains of chloral-hydrate induced sound and undisturbed sleep for six hours, and the patient awakened free of hiccough. [The *Medical Digest*, sect. 963 : 5, shows that in 1871 Dr. Jewitt found chloral most valuable. In the paper referred to, six cases are given, all of which were rapidly cured after failure with other drugs.—*Rep.*]

2197. *Allan on the Treatment of Violent Delirium in Fever Cases.*—Mr. Allan, in the *Lancet*, Dec. 1883, p. 1039, publishes a few remarks on the severe forms of delirium in cases of typhus and enteric fever. The cases which are difficult to manage are those in which the delirium assumes a wild or fierce character. The worst cases of all are where there is pulmonary complication. Mr. Allan suggests the use of morphia suppositories, to be given until rest is procured. Where there is simple insomnia, twenty or twenty-five grains of chloral-hydrate in syrup (repeated, if necessary, in an hour) generally secures good sleep for an adult. Respiratory embarrassments, lividity of nails, &c., are serious contra-indications to the use of narcotics.

2198. *Kennedy on Salicylate of Sodium.*—In the *Med. Times and Gaz.*, Dec. 1883, p. 722, a note says that Dr. Kennedy, in the *Phil. Med. Reporter*, Nov. 24, recommends the following formula for rendering the salicylate of soda pleasant to the taste. ℞ Sodæ bicarbon. ʒij.; acidi salicyl. ʒiij.; glycerinæ, aquæ, āā, ʒij.: a teaspoonful every four hours. The carbonic acid gas is set free, and the sodium, uniting with the salicylic acid, forms a salicylate, which is held in suspension by the glycerine.

2199. *Ransome on the Influence of Iodoform on the Body-weight in Phthisis.*—Dr. A. Ransome, in the *Brit. Med. Jour.*, Jan. 1884, p. 8, details notes on the use of iodoform in the treatment of phthisis. The drug was administered in the form of a pill, a grain and a half, combined with two grains of croton-chloral, three times a day. Twenty-one cases are recorded. Four of these were in the first stage of the disease, and three appear to have received benefit. Five were in the second stage of the disease; all of these increased in weight on commencing to take iodoform; but in three cases the increase did not continue, though they did not lose weight for several months. Of the twelve cases in the third stage, two distinctly gained in weight; six, after sundry variations, remained at the same weight after six or eight months of the treatment. The remaining four all diminished in weight.

2200. *Murrell on the Treatment of the Night-sweating of Phthisis by Physostigma and Eserine.*—Dr. Murrell, in the *Practitioner*, Dec. 1883, communicates the results of over fifty cases, in which he used physostigma and the salts of eserine in the treatment of the night-sweating of phthisis. Physostigma itself was used in thirty-four cases. One-tenth of a grain of the extract was made into a pilule. In ten cases only one pilule was given at bed-time, and in eight of these the sweating was arrested by the fourth or fifth night. In twenty-four cases the pilules were given three times during the night, and in most cases the sweating was stopped by the second night; it did not return, as a rule, for three or four weeks, when it was necessary to resume the drug. The author also tried the salts of eserine; the hydrobromate, the salicylate, or the sulphate answers equally well. It is best administered in pilules containing one-sixtieth of a grain, two or three of which may be taken during the night. In fifteen consecutive cases in which it was tried, there was not a single failure.

2201. *Verrall on Iodide of Potassium as an Anti-galactagogue.*—Mr. T. J. Verrall, in the *Brit. Med. Jour.*, Jan. 1884, p. 9, records a case in which iodide of potassium proved of great service in staying an excessive secretion of milk. Belladonna and aconite had been freely applied, combined with firm compression and the administration of salines and purgatives, but had proved of little use. Ten grains of iodide of potassium were given three times a day, and, after the fourth dose, relief was obtained. In all, 160 grains were taken; then all trace of swelling had disappeared. With each dose, half a grain of quinine was given. No symptom of iodism was produced. [The specific value of iodide of potassium as an antigalactagogue was strongly insisted upon by Roussel in 1858, and by many subsequent observers. Vide *Medical Digest*, sect. 1602 : 3.—*Rep.*]

RICHARD NEALE, M.D.

2202. *Seifert on Agaricine.*— This substance,

which is extracted from the agaricus albus, has been tried by the author in phthisis and other diseases, and the results of the treatment are given in the *Progrès Méd.* (Jan. 26). He found that a dose of 4 to 20 milligrammes lessened the perspiration and cough of consumptive patients without producing nausea or diarrhœa. A case of hyperhidrosis, from lesion of the cervical sympathetic, was also benefited by the use of agaricine. The effect is produced after five or six hours only; and the best plan is to give the drug by the mouth, as the hypodermic injection causes much pain, and does not present any special advantages.

2203. *Moncorvo on the Treatment of Whooping-Cough by Resorcine.*—Dr. Moncorvo, of Rio de Janeiro, recommends (*Bull. de l'Acad. de Méd.*, Jan. 22) the local application of a one per cent. aqueous solution of resorcine to the glottis by means of a soft brush. He gives a very favourable account of this practice, which is based upon the hypothesis that whooping-cough is caused by a micro-organism, and upon the fact, discovered by Dujardin-Beaumetz, that resorcine has a marked action upon ferments.

2204. *Moleschott on the Treatment of Diabetes by Iodoform.*—The result of Dr. Moleschott's method of treatment are quoted in the *Paris Méd.*, Jan. 5, 1884, and are certainly promising. In five cases the sugar disappeared from the urine after a few days, and without special diet. The dose is at first 10 to 20 centigrammes daily, but it must be gradually increased to 30 or 40 centigrammes.

2205. *Fourier on Lobelia Inflata.*—The author (*Conc. Méd.*, Feb. 1884) has found this drug useless in nervous asthma, but recommends it in cardiac dyspnœa, congestion of the lungs, and phthisis. The tincture of lobelia combined with iodide of potassium gives good results in chronic bronchitis and catarrhal asthma. J. S. Kaeser, M.D.

2206. *Pusinelli on Cannabin Tannate as a Hypnotic.*—Dr. Pusinelli, of Dresden (*Berliner Klin. Wochensch.*, 1884, No. 1), gave this drug in doses of 0·1 gramme to 1·5 gramme (1½ grain to 23 grains) in sixty-three cases of sleeplessness of the most varied kind, most of them being cases of grave organic disease, but some more purely 'nervous.' He finds that the chief indications for its use are, in the first place, the sleeplessness which occurs in simple habitual 'neurasthenia;' in the second, that which occurs in chronic non-painful diseases, with long confinement to bed. It is not, apparently, an anodyne, and in phthisis was not found of much value where there was a severe cough. The drug has no unpleasant after-effects. A moderate dose to begin with is ten grains, as a small dose may increase the restlessness. It is not to be despised as a hypnotic, but does not justify the encomium lavished upon it by Fronmüller. E. J. Edwardes, M.D.

2207. *Samuel on Subcutaneous Injection of Water in Cholera.*—Dr. Samuel, of Königsberg, writes to the *Deutsche Med. Wochensch.* of Nov. 14, emphasising the advantages of subcutaneous injection of water in the collapse of cholera, and laying stress upon the point that such injection should be continuous. As this stage lasts only from twenty-four to thirty-six hours, a continuous injection for this length of time is possible, and, in Dr. Samuel's opinion, ought to be tested in cholera itself, as the same conditions cannot be produced by experiments on animals. He also recommends that it should be begun sufficiently early, and not delayed until the conditions are too bad to be improved.

2208. *Hüllmann on Chlorate of Potash.*—Dr. Hüllmann, of Halle, in a paper which he contributes to the *Deutsche Med. Wochensch.* of Nov. 14, gives an outline of the vicissitudes through which chlorate of potash has passed in the last twenty years, being at first exalted into a universal and absolutely harmless remedy, and lately regarded as highly dangerous, or even unsuitable for internal administration at all. Dr. Hüllmann has employed it constantly during all those years with good results, and with 0·7 per cent. of deaths, and has come to the following conclusions. 1. A 4 per cent. solution of chlorate of potash, given every hour, is not poisonous. 2. It is the best known remedy for diphtheria, and, if given in time, it will prevent the disease from reaching its height. 3. While it is being given internally, it should not be used at the same time as a gargle, from the difficulty of determining how much is swallowed or absorbed. Permanganate of potash as a gargle is a good substitute. 4. During the treatment the patient must be well nourished, and wine must be given if necessary.

2209. *Radix Gossypii as a Substitute for Ergot.*—The *Wiener Med. Blätter* of Oct. 11 recommends, on the authority of Prochovnik, the radix gossypii as a substitute for ergot. Its expulsive action is not so great, but it does not induce tetanic symptoms in the same way. It was particularly useful in hæmorrhage after abortion, and also in myoma of the uterus. The fresh infusion acts best, but the American fluid extract is also good. It is considerably cheaper than ergot. Alice Ker, M.D.

2210. *Quinquaud on the Action of Arsenic upon Diabetes.*—Dr. Quinquaud, in an article published in the *Bull. Gén. de Thérap.*, reports the results obtained from the administration of arsenic to animals in which diabetes had been experimentally produced, and also to patients suffering with melliturina. Fowler's solution was used in moderate doses. It was found that arsenic administered to diabetic patients usually produced a diminution of the daily amount of sugar excreted; but very often there is also a decrease in the quantity of water, and also a small but positive reduction in the urea. These results occurred uniformly in the animals experimented upon; they were less so in man, possibly because the doses were relatively smaller.

2211. *Mazzara on a Compound of Quinine and Chloral.*—A new compound of quinine with chloral is described by Dr. Mazzara (*L'Orosi*, Band. vi., 430, and *Birmingham Med. Jour.*), which, he believes, will prove to be a type of a series of compounds of chloral with the alkaloids. It is prepared by adding to a solution of quinine in chloroform an equivalent quantity of chloral, and allowing the mixture to evaporate at the ordinary temperature. The gelatinous transparent yellowish residue is taken up with ether and the solution gently warmed, when an abundant separation of white warty crystals immediately commences, and in a short time the whole liquid is converted into a crystalline paste. Or the compound may be prepared directly by dissolving 32 parts of anhydrous quinine in chloroform, diluting this solution with anhydrous ether, adding 147·5 parts of chloral and gently warming. The crystals are washed with cold ether and dried over sulphuric acid, and are thus obtained snow-white, the crystals being tasteless at first with a slightly bitter aftertaste. The compound is represented by the formula $C_{20}H_{24}N_2O_2.CCl_3COH$. Chloral-quinine volatilises unaltered in dry air at a temperature of 149° C. Its

solutions in dilute acids are fluorescent and give the thalleioquin reaction. With sodium bicarbonate it gives a precipitate free from chlorine, and it is thought doubtful whether chloral-quinine can remain undecomposed in aqueous solution.

2212. *Runeberg on Sudden Death after Injection of Morphia in Angina Pectoris.*—Dr. Runeberg relates (*Finska Läkaresällskapets Handlingar*, Vol. xxiv. ; and *New York Med. Record*) the case of a man who suffered from frequent attacks of angina pectoris ; he appeared to be perfectly healthy in the intervals, and nothing abnormal could be discovered concerning the heart. Dr. Runeberg saw him in one very severe attack which had lasted twenty-four hours. He was very restless, and complained of severe pain in the precordial region. In order to lessen the pain and to make an examination of the heart more easy, the author gave him a subcutaneous injection of one-fourth of a grain of morphia. A few minutes later the patient gave a shudder, opened his eyes (the pupils were widely dilated), and, after two or three sighing respirations, died. The necropsy showed a dilated heart, in the walls of which were numerous points, some hard and cartilaginous, others soft and of a reddish-yellow colour. The aorta and coronary arteries were atheromatous.

OBSTETRICS AND GYNÆCOLOGY

RECENT PAPERS.

2213. DEPAUL.—On Support of the Perinæum. (*Jour. des Sages Femmes*, Sept. 19, 1883.)

2214. FONTAN.—On Supernumerary Mammæ. (*Jour. des Sages Femmes*, Dec. 16, 1883.)

2215. PARISH, W. H.—On a Porro-Müller Operation. (*Obstetrical Society of Philadelphia*, Oct. 4, 1883.)

2216. WILLIAMS, E. T.—On a Contrivance for Dilating the Os Uteri by Elastic Pressure. (*Boston Med. and Surg. Jour.*, Vol. cviii., No. 23.)

2217. DORLAND, J.—Successive Dropsies of the Amnion always Specific. (*Canada Med. and Surg. Jour.*, Nov. 1883.)

2218. RIVET.—On the Spontaneous Rupture of the Umbilical Vessels in Cases of Insertio Velamentosa. (*Arch. de Tocol.*, Sept. 1883.)

2219. PETIT.—On Ileo-vaginal and Utero-intestinal Fistulæ. (*Annales de Gynécologie*, 1882.)

2220. WIEDMANN.—Ethyl-bromide as an Anæsthetic during Parturition. (*L'Union Médicale*, Dec. 13, 1883.)

2221. MAYOR.—The Treatment of the Vomiting of Pregnancy by Inhalations of Oxygen. (*Revue Méd. de la Suisse Romande*, Oct. 1883.)

2222. ARNOUX, BASSO G.—Pregnancy with Persistent Hymen. (*Annali d'Ostetricia, Ginecologia, e Pediatria*, Oct. 1883.)

2223. Intra-uterine Use of Iodoform. (*Wiener Med. Blätter*, Nov. 29.)

2224. VODIAGIN.—On Abortion Induced by Intestinal Worms. (*Meditzinskoie Obozrenie*, Nov. 1883, pp. 725-6.)

2225. GRIGG.—Vinegar in Post Partum Hæmorrhage. (*Brit. Med. Jour.*, January, p. 56.)

2226. BRAITHWAITE.—Arrest of Threatened Mammary Abscess. (*Lancet*, Dec. 1883, p. 1064.)

ART. 2213. *Depaul on Supporting the Perinæum.*—In the *Clinique d'Accouchments* at Paris, Depaul in one of his last lectures said : 'I *never* support the perinæum; I am contented with supporting the head of the fœtus and preventing it from emerging too suddenly.' Often, when the perinæum has been supported, it has been found on withdrawing the hand that a rent has been made in the perinæum by the hand itself. For this reason Depaul said, 'Support the head, but leave the perinæum alone.'

2214. *Fontan on Supernumerary Mammæ.*—Dr. Fontan relates the case of a woman with four breasts, two of which are normally situated. The other two are somewhat smaller, and are situated two centimètres below the upper ones. The woman has suckled with all four breasts, all of which contained an abundant supply of milk.

2215. *Parish on a Case of Porro-Müller's Operation.*—Dr. Parish reports a case performed by him upon a dwarf at the Philadelphia Hospital, the patient surviving only forty eight hours. The child, which had arrived at eight months and a half of intra-uterine gestation, survived three weeks. The modification of Müller, which consists in drawing the uterus through the abdominal incision, and then constricting the cervix before incising the uterus, was resorted to. The length of the incision, seven inches, allowed of the escape of intestines. The child was born asphyxiated, but soon breathed. [The reporter has on more than one occasion pointed out that Müller's modification is a retrograde step from the operation of Porro, which consists in incising the uterus before drawing it out of the abdomen. The above case is an illustration of the drawbacks of Müller's operation.—*Rep.*]

2216. *Williams on a Contrivance for Dilating the Os Uteri by Elastic Pressure.*—Dr. E. T. Williams says it is intended as a substitute for sponge-tents and the various rubber water-dilators. His apparatus consists of a soft rubber bulb and flexible tube, a pair of compressing splints, and an elastic rubber band. The bulb being filled with water, was to be connected with a Barnes's bag or any other water dilator. This being inserted into the cervix, compression was to be applied to the bulb by means of the splints and elastic band, and the instrument to be left in position to do its own work. Compression could be graduated to fit the circumstances of the case. The means of connecting the Barnes's bag with the tube from the bulb was by a screw on the tube fitted to hold the small nozzle of a Davidson's syringe, which nozzle was to be slipped into the tube of the dilator and securely tied in.

2217. *Dorland on Successive Dropsies of the Amnion.*—Dr. Dorland relates six cases in which dropsy of the amnion occurred in successive pregnancies in different patients. He concludes that successive dropsies of the amnion are always specific. The data can only be derived from private practice where attendance on a family has extended over a number of years. FANCOURT BARNES, M.D.

2218. *Rivet on Spontaneous Rupture of the Umbilical Vessels in Cases of Insertio Velamentosa.*—This accident was observed (*Arch. de Tocol.*, Sept. 1883) in a case of twin birth, after the first child had been born. The head of the second was enveloped by the membranes when it presented itself at the vulva, and when these were ruptured a stream of blood escaped. It was afterwards ascertained that the umbilical vessels, which ran in the membranes for some distance, had all been ruptured. The child was in a state of apparent death and extremely pale, but could be revived after a time.

2219. *Petit on Ileo-vaginal and Utero-intestinal Fistulæ.*—Until the publication of a series of papers by Dr. L. H. Petit in the *Annales de Gynécologie* for 1882 and 1883, cases of ileo-vaginal and utero-intestinal fistulæ had never been made the subject of a comprehensive work. In the study of these cases it is

very important to make a distinction between the simple fistulous communications and the abnormal anus; in the former case a part only, and in the latter the whole of the fæces, is discharged through the vagina. When a simple fistulous communication exists there are symptoms of intestinal irritation, and fæces are discharged through the vagina, but at the same time the normal evacuations persist. The fistulæ have a tendency to contract spontaneously, and the treatment consists simply in cleanliness and a few cauterisations. The formation of an abnormal anus is preceded by symptoms of internal strangulation, and the normal evacuations do not reappear. There is hardly any tendency to a spontaneous cure, and even the most careful operations fail in many cases. The diagnosis of the affection itself is easy, but the surgeon must ascertain whether the intestine opens into the uterus or into the vagina, whether the rectum or a higher part of the intestine is implicated, and whether the lower end is permeable. He must also try to discover what has been the mode of formation of the abnormal opening; in most cases a history of internal strangulation following some rupture of the uterus or vagina will be obtained. In other cases it may have been a pelvic abscess, a suppurating dermoid cyst, or a cancerous tumour. The treatment may be palliative or curative; the former consists of vaginal and rectal injections, attention to any ulceration that may exist, &c.; occlusion of the vulva was tried in one case, but did not succeed. The curative treatment includes cauterisations and cutting operations; the edges of the fistula may be pared and brought together, or laparotomy may be performed, and the continuity of the intestine restored by sutures. In other cases section of the prolapsed intestine or of the projecting spur may be sufficient, with or without section and dilatation of any coexisting stricture of the vagina. The formation of an ileo-rectal fistula is also mentioned by Dr. Petit.

2220. *Wiedmann on Ethyl-bromide as an Anæsthetic during Parturition.*—In a lecture, summed up by the *Union Médicale* for Dec. 13, 1883, Professor Wiedmann, of St. Petersburg, recommends ethyl-bromide as a rapid and safe anæsthetic, especially for parturition, where complete narcosis is not necessary. The duration of the labour is not prolonged, and the author never saw a case of uterine inertia which could be ascribed to the anæsthetic.

2221. *Mayor on the Treatment of Vomiting in Pregnancy by Inhalations of Oxygen.*—The author reports in the *Revue Médicale de la Suisse Romande*, Oct. 1883, four cases of vomiting and anorexia in pregnant women, rapidly cured by inhalations of five to ten litres of oxygen. One patient was restored to health after a single inhalation, while others required several sittings. Some of the cases were very serious, and had not derived any benefit from the ordinary treatment. J. S. Kaeser, M.D.

2222. *Arnoux on Pregnancy with Persistent Hymen.*—A young married woman, aged 23, sought advice for constant vomiting. She doubted if she could be pregnant, as an obstacle existed which prevented perfect connection. On examination the finger was arrested at about an inch and a third from the ordinary site of the vulvo-vaginal orifice by a diaphragm, which in the upper right part with difficulty permitted the entrance of the tip of the finger; beyond this could be felt another membrane, through which the finger could not be passed. With the uterine sound, a very small aperture was found in the upper part of the posterior fold. The apertures did not correspond, that in the upper fold being covered by the anterior lower fold. Pregnancy was made out by examination by the rectum. The membranes were divided by a probe-pointed bistoury, and the woman was discharged well in a few days. This case is interesting from the occurrence of pregnancy with a persistent hymen, and from the unusual site of the hymen. G. D'Arcy Adams, M.D.

2223. *Intra-uterine Use of Iodoform.* — The *Wiener Med. Blätter* of Nov. 29 has an article on the employment of iodoform pencils in the intra-uterine treatment of puerperal women, as practised in the clinic of Prof. Späth, in Vienna. The iodoform is mixed with gum arabic and glycerine, and is moulded into bougies of 5 or 6 centimètres long (about 2½ inches), each containing 6 grammes (90 grains) of pure iodoform. The uterine cavity having been washed free from loose blood-clots and putrid fluid by a carbolised injection, the bougie is introduced entirely within the os, where it remains until it melts, when it can be replaced by another if desired. A prolonged antiseptic action is thus kept up without the irritation of introducing a syringe; the employment of gum arabic instead of a fatty excipient guards against rancidity; and the addition of glycerine prevents the bougie from being too brittle. The unpleasant odour of the iodoform is less prominent when in the solid form than in powder, and the bedclothes and linen can be more easily protected from contamination with it. One or two cases are cited where great benefit has resulted from this treatment. Alice Ker, M.D.

2224. *Vodiagin on Abortion Induced by Intestinal Worms.*—At a meeting of the Moscow Medical Society, Dr. Vodiagin (*Meditzinskoie Obozrenie*, Nov. 1883) reported the cases of two young and generally healthy women, one of whom had aborted five successive times during six years, and the other twice within two years. In one of them bothriocephalus latus was present; in the other, tænia armata. Shortly after the cure of the parasites both of the patients became pregnant, labour now coming on at full term. The author is strongly inclined to think that abortion in these two cases was induced, in a reflex way, by continued irritation kept up by the worms in the intestines of the patients.

V. Idelson, M.D.

2225. *Grigg on Vinegar in Post Partum Hæmorrhage.*—Dr. Grigg, in the *Brit. Med. Jour.*, Jan. 1884, p. 56, recommends the use of vinegar in cases of *post partum* hæmorrhage. A wineglassful given after the placenta is expelled causes rapid contraction of the uterus and speedy arrest of the hæmorrhage. It should be given without water, and a smaller dose repeated in fifteen minutes if the effect be not well-marked. It is better and safer than ergot.

2226. *Braithwaite on Arrest of Threatened Mammary Abscess.*—Dr. J. Braithwaite, in the *Lancet*, Dec. 1883, p. 1064, writes that, for many years, he has given three consecutive doses of ten grains of quinine at intervals of twelve hours, with great success, in cases of threatened mammary abscess, at the same time using the usual local application of belladonna. It is unsuitable if the bowels be confined and the tongue furred. The author states that he used the belladonna alone for many years, but, when he used the quinine in addition, there was a marked difference in the rapidity and certainty of the cure.

Richard Neale, M.D.

DERMATOLOGY.

RECENT PAPERS.

2227. MASSEY.—Treatment of Tinea Capitis by Croton-oil. (*Thèse de Paris*, 1882; abstract in *Journal of Cutaneous and Venereal Diseases*, Vol. i., No. 10.)

2228. KÉMHADJIAN MIHRAN.—Albuminuria as a Consequence of Cutaneous Excitement. (*Ibid.*)

2229. MATHIEU.—Itching in Bright's Disease. (*Ibid.*)

2230. UNNA.—Herpes Progenitalis, especially in Women. (*Ibid.*, No. 11.)

2231. LAISSUS.—Erysipelatous Eruptions produced by Arnica. (*L'Union Médicale*, Aug. 17; abstract, *Ibid.*, No. 12.)

2232. DANIEL.—A Condition of the Skin produced by the Practice of Hypodermic Injection. (*Ibid.*, No. 13.)

2233. SEGUIN.—Lepra Anæsthetica. (*Ibid.*, No. 14.)

2234. CORNIL.—The Situation of the Micro-organisms in Variola, Vaccinia, and Erysipelas. (*La Tribune Médicale*, Sept. 9, 1883; abstract, *Ibid.*, No. 14.)

2235. AUSPITZ.—The Application of Medicinal Substances to the Skin in Thin Firmly Adherent Layers. (Abstract, *Ibid.*, No. 14.)

2236. UNNA.—Keratoma Plantare and Palmare Hereditarium. (Abstract in *Monatsheft für Prakt. Derm.*, No. 10, 1883.)

2237. LESSER.—Etiology of Herpes Zoster. (Virchow's *Archiv*, vol. xciii.; abstract, *Ibid.*)

2238. HAHN.—Transplantation of Healthy Skin in Lupus. (*Ibid.*, No. 9, 1883.)

2239. UNNA.—Healing of Wounds. (*Berlin. Klin. Wochensch.*, No. 35, 1883; abstract, *Ibid.*, No. 10, 1883.)

2240. SPRENGLER.—A Case of Death caused by the Application of Soft Soap. (*Aerztl. Intell. Blätt.*, No. 28; abstract, *Ibid.*, No. 10, 1883.)

2241. DAMSCH.—Inoculation of Leprosy. (*Ibid.*, No. 9, 1883.)

2242. BEHREND.—Urticaria Factitia. (*Ibid*, No 9, 1883.)

2243. GÜNTHER.—Absorption through the Skin. (*Corresp. Blätt. für Schweizer Aerzte*, 1883; abstract, *Ibid.*, No. 9, 1883.)

2244. LELOIR AND CORNIL.—Experimental and Histological Inquiries on the Nature of Lupus. (*Comptes Rendus de la Société de Biologie*, 1883; abstract, *Ibid.*, No. 9, 1883.)

2245. BEHM.—Intra-uterine Vaccination. (*Zeitschr. für Geburtshülfe und Gynækologie*, Vol. viii., Heft 1, 1882; abstract, *Ibid.*, Nos. 7 and 8, 1883.)

2246. ZIMMERLIN.—Epidemic of Herpes. (*Korrespondenz Blätt. für Schweiz. Aerzte*, March 15, 1883; abstract, *Ibid.*, No. 10, 1883.)

2247. BROCQ.—Bouton de Biskra. (*Annales de Derm. et de Syph.*, Vol. iv., No. 9.)

2248. LEMOINE.—Lichen Planus. (*Ibid.*, No. 6.)

2249. LANDOUZY.—Herpes Zoster and Zoster-like Exanthems. (*Semaine Médicale*, Sept. 20, 1883; abstract, *Ibid.*, No. 10.)

2250. BESNIER.—Lupus and its Treatment. (*Ibid.*, Nos. 7 and 8.)

2251. SHERWELL.—Paget's Disease, or Malignant Papillary Dermatitis. (*Transactions of the American Dermatological Association*, 1883.)

2252. DUHRING.—Case of Ainhum, with Microscopic Examination. (*Ibid.*)

2253. MORRIS AND HENDERSON.—The Ringworm Fungus. (*Journal of the Royal Microscopical Society.* 1883.)

ART. 2227. *Massey on the Treatment of Tinea Capitis by Croton-oil.*—Massey (*Thèse de Paris*, 1882; abstract in *Jour. of Cutaneous and Venereal Diseases*, Vol. i., No. 10) finds that, in cases not too inveterate, a cure or decided amelioration is usually obtained within a period varying from three to eight months, and after from three to five applications of the remedy. As to erysipelas, statistics show that it follows the croton treatment in an average of four cases out of a thousand, and that it has invariably been cured. To sum up, the results of treatment by croton tiglium dressing may be pronounced highly satisfactory in *herpes tonsurans*, and encouraging in *porrigo favosa* and in certain cases of *porrigo decalvans*.

2228. *Kémhadjian Mihran on Albuminuria as a Consequence of Cutaneous Excitement.*—The author (*Thèse de Paris*, 1882; *Jour. of Cutaneous and Venereal Diseases*, Vol. i., No. 10) makes the following statements. 1. Cutaneous excitement, by whatever means produced, may give rise to albuminuria. 2. The amount of albumen, which in such a case can be almost at once detected, will vary according to the degree of excitement, the energy of the exciting agent, the extent of surface acted on, and the duration of the excitement. 3. The duration of the albuminuria will also be determined by the same conditions; in most cases it is transient, but, under the influence of extreme peripheral irritation, it may persist, along with an alteration in the organic structure involved. 4. Albuminuria, proceeding from cutaneous excitement, depends proximately on a disturbance of vaso-motor innervation.

2229. *Mathieu on Itching in Bright's Disease.*—Mathieu (*Thèse de Paris*, 1882; abstract in *Journal of Cutaneous and Venereal Diseases*, Vol. i., No. 10) states as follows. 1. During the course of Bright's disease itching is experienced unconnected with any cutaneous eruption, and sometimes invading every portion of the integument. 2. This symptom may be described as occurring in three different forms—first, as itching; secondly, as horripilation; thirdly, as formication. 3. These sensations are a frequent accompaniment of Bright's disease. They are complained of at various periods. They may be felt both at the onset and during the course of the confirmed malady. 4. When met with at the commencement, they rank as an important symptom, and one of great semeiological value. They coincide at this period with the frequent micturition, the cramps, the palpitations, the disorders of hearing, the epistaxis, &c.; and may precede the appearance of œdema and albuminuria, thus serving without any other aid to place the physician on the right diagnostic track. 5. Coming on at a later period, they merely constitute an additional and conjoint symptom of the disease. 6. The pathology of this phenomenon is as yet based upon hypothesis. It represents a disorder of the sensory sphere, due probably to the irritation produced at the terminal extremities of the nerves by refuse material retained in the blood through failure of the eliminative functions of the kidneys.

2230. *Unna on Herpes Progenitalis, especially in Women.*—Dr. Unna, in an article on 'Herpes Progenitalis' (*Journal of Cutaneous and Venereal Diseases*, Vol. i., No. 11), calls attention to the importance of ascertaining, with greater statistical exactitude in the future, the period of incubation in this affection. In men, he remarks, the interval of time elapsing between the occurrence of the cause (coition) of herpes and the eruption being quite determinable, a legitimate conclusion may he formed as to the greater or less physiological separation of

involved ganglia (more or less numerous interspersions of ganglionic centres in the course of a nerve). According to Dr. Unna, the eruption oftenest occurs on the second or third day, and not on the first day after coition. Clinically, nothing speaks so strongly for ganglionic implication in zoster and herpes progenitalis as the subsequent eruption of the exanthem and period of incubation, the exciting cause of necessity overcoming many obstacles to effect the result. In men, herpes progenitalis is usually found over the course of the ramus dorsalis penis, which forms connections with the sympathetic; and the large dorsal vein being (according to Henle) almost the only afferent circulatory conduit during penile erection may explain the pathogenesis of herpes progenitalis, in a manner similar to that made probable for herpes labialis febrilis by Gerhardt—namely, compression of the nerves.

2231. *Laissus on Erysipelatous Eruptions produced by Arnica.*—The author (*L'Union Médicale*, Aug. 17; abstract in *Jour. of Cutaneous and Venereal Diseases*, Vol. i., No. 12) has reported to the Société de Médecine two cases in which the application of pure tincture of arnica for the relief of contusions was followed by well-marked symptoms of vesicular erysipelas. Both subjects were females having lymphatic constitutions and fine sensitive skins, and the affections in both were entirely local. The reporter cited a number of authorities who have noted the irritating effects of arnica on the skin, but has only found one writer (Ruddock) who has mentioned it as producing erysipelas. He concludes that, in view of its influence upon certain constitutions, this agent ought always to be employed in a state of dilution.

2232. *Daniel on a Condition of the Skin produced by the Practice of Hypodermic Injection.*—The author (*Jour. of Cutaneous and Venereal Diseases*, Vol. i., No. 13) relates a case, which is interesting from the strong analogy that the condition bore to some of the syphilodermata which frequently come under our observation, a resemblance which would naturally lead the medical men astray in arriving at a diagnosis without a previous knowledge of the case. The arms were one mass of sores from the wrists to the shoulders; the legs were in like condition from ankles to knees. The eruption was tubercular in form; many of the tubercles were in a stage of ulceration, discharging a peculiar greyish matter mixed more or less with blood, very offensive when allowed to remain for a time without cleansing the parts. The discharge was acrid in its properties, excoriating or scalding the surrounding parts painfully, leaving a widespread angry-looking surface, mostly on the back and upper part of the legs.

2233. *Seguin on Lepra Anæsthetica.*—Dr. Seguin (*Journal of Cutaneous and Venereal Diseases*, Vol. i., No. 14) relates the following case. About four years ago, before the death of his brother, the patient was noticed to have a few coloured spots (not claret-coloured) on both thighs. There were no vesicles, but the mother thinks the spots were furfuraceous. A stabile galvanic current, with the anode over the neuromata and the cathode in some indifferent location, or more commonly over the brachial plexus, was first given. Then the cathode was applied labile over both forearms and over all the intrinsic muscles of the hand. On November 1 and 14 Dr. Amidon made an electrical examination of the case. Galvanisation of the left ulnar nerve at the elbow produced contractions in the ulnar group of the forearm only, Ca cc = An cc, forty cells. In the left flexor carpi ulnaris, Ca cc > An cc. In the interosseous muscles An cc > Ca cc, and there was a total lack of faradic contractility. On the right side much the same reactions existed. On Nov. 7, the mother felt confident that the fingers of the patient had become much more supple. By Nov. 14 there was very noticeable diminution in the size of the neuromata, while the arms and hands began to fill out, and the hands became much more flexible and useful. After eight months of treatment, the patient was much better in every way, the neuromata almost disappearing, but the deformity and anæsthesia of the hands persisted.

2234. *Cornil on the Situation of the Micro-organisms in Variola, Vaccinia, and Erysipelas.*—M. Cornil (*La Tribune Méd.*, Sept. 9, 1883; abstract in *Journal of Cutaneous and Venereal Diseases*, Vol. i., No. 14) reports that in the variolous specimens the mucous layer of the epidermis was found transformed into a multitude of small alveolar cavities, partially filled with migratory cells swimming in a fluid which sometimes presented threads of fibrin. These cavities contained the micro-organisms of small-pox, very clearly brought out by the contrasted colours employed. They were somewhat unequal in size, but very small (about $\frac{3}{10}$ of a millimètre in diameter), of rounded form, and either solitary or aggregated. In addition to these, numerous small granular elements were visible, probably the remains of nuclei. The papillæ were always greatly altered in the vicinity of the pustule; their tissue was always more or less infiltrated with small round cells, and they sent forth irregular prolongations into the mucous layer; in these prolongations, and in the papillary tissue long rows of micro-organisms were detected, which were probably also present in the lymphatics of the papillæ, from which they penetrated into the cells of the mucous layer, and into the areolar cavities of which it was composed. The vaccine pustules showed the same lesions, and the same organisms similarly arranged within the cavities of the mucous layer. In the present investigation transverse sections of the lymphatic trunks at the base of the papillæ revealed lymphatic cells and chains of small micrococci consisting of rounded grains placed end to end, and having a diameter of about $\frac{6}{100}$ths of a micromillimètre. Deeper down in the derma, and between the bundles of connective tissue, similar groups of organisms were observed, and also in the adipose cellular tissue; micro-organisms were likewise discovered in the blood-vessels. They were present in considerable numbers between the inner sheath of the hair-follicles and the space comprised between the latter and the roots of the hairs. In brief, the erysipelatous inflammation of the skin, caused by the specific micro-organism, appears to follow upon the entrance of the latter into the lymphatic ducts.

2235. *Auspitz on the Application of Medicinal Substances to the Skin in Thin Firmly Adherent Layers.*—Auspitz (abstract in *Jour. of Cutaneous and Venereal Diseases*, Vol. i., No. 14, p. 445), states that, as a vehicle for chrysarobin, he employs an artificial cuticle made by dissolving one part of purified gutta-percha in ten parts of chloroform. This forms an excellent medium for fixing the application, as it adheres firmly and without alteration for two or three days, or even longer. On comparing it with gelatinous excipients, the latter are seen to possess the following disadvantages. 1.

They are liable to be rubbed off with the limbs or clothing, and hence usually necessitate one or two renewals of the application. 2. The gutta-percha compound forms a thinner and more delicate cuticle than either collodion or gelatine, producing neither tension nor pain. 3. Its neutral character adapts it as a protective investment, to parts however sensitive. Prepared as above, it has never given rise to irritative symptoms, either in children or in adults, even when painted over large surfaces. 4. It exerts a more equable pressure than gelatine, the flexible elastic gutta-percha adapting itself better to uneven surfaces; gelatine forms a brittle coating, so that an addition of glycerine is needed to render it sufficiently pliant and prevent it from contracting too much when dried, especially when joints are to be covered.

2236. *Unna on Hereditary Plantar and Palmar Keratoma.*—Dr. Unna (abstract in *Monatsheft für Prakt. Derm.*, 1883, No. 10) has observed instances of plantar and palmar keratoma (abnormally hard and thickened epidermis) in eight persons belonging to three generations of the same family. By painting with 10 per cent. solution of salicylic acid in ether, and the application of salicylic plaister, he removed the growth in some cases and improved the condition in the others. In these cases, the diseased parts were sharply demarcated from the sound portions, in this respect differing from ichthyosis, and the sweat-glands not only acted normally, but even in excess. The sensibility of the affected surfaces was unimpaired. A similar case was found in another family in which all the surviving children (three in number) inherited the malady from the mother. In this family sensibility was so impaired, that objects with a temperature at the boiling point could be held in the hand.

2237. *Lesser on the Etiology of Herpes Zoster.*—Dr. Lesser (Virchow's *Archiv*, Vol. xciii.; abstract in *Monatsheft für Prakt. Derm.*, 1883, No. 10) publishes an account of the pathological changes in a case of herpes zoster. Inflammatory and degenerative changes were found in the fifth intercostal nerve; and the nerve-elements of the fifth intercostal ganglion were almost entirely replaced by connective tissue. The author is inclined to adopt the hypothesis of Weigert, who has suggested that the phenomena of the disease are caused by necrosis of minute portions of skin, due to some unknown nerve-disturbances.

2238. *Hahn on Transplantation of Healthy Skin in Lupus.*—Hahn (*Monatsh. für Prakt. Derm.*, No. 9, 1883) has scraped out lupus-tissue and transplanted healthy skin to the fresh wound in five cases with good results. The patients were anæsthetised, and, after the scraping was finished and the bleeding arrested (which sometimes did not occur until after several hours), the whole wound was covered by portions of skin about half a centimètre long and a quarter centimètre broad, the portions consisting only of cutis and epidermis. Under iodoform bandage, complete union of the transplanted portions occurred mostly in from five to eight days. A year had elapsed since the treatment of the first case, the cure being so far permanent, and no relapse having occurred.

2239. *Unna on Healing of Wounds.*—Dr. Unna (*Berlin. Klin. Wochensch.*, No. 35, 1883; abstract in *Monatsh. für Prakt. Derm.*, No. 10, 1883) discusses the healing of wounds under the double aspect of healing of the cutis and the final covering by epidermis (*dermatoplasia* and *keratoplasia*) in so far as these processes are favoured or delayed by the application of remedies. Whilst corrosive sublimate and carbolic and salicylic acids act directly and destructively on the epidermis, this objection applies in a much less degree to iodoform and boracic acid. Unna had excellent results with 10 per cent. sulphur ointment. Ulcers with healthy granulations, when dressed with a thinly spread layer of sulphur ointment, healed with more than usual rapidity. Sugar also was found to promote healing. It is also noted that linseed-oil was useful in cases of chronic eczema, where ordinary ointment was not well borne.

2240. *Sprengler on a Case of Death caused by Application of Soft Soap.*—Dr. Sprengler reports (*Aerztl. Intell. Blätter*, No. 28; abstract in *Monatsh. für Prakt. Derm.*, No. 10, 1883) a case in which soft soap—now much used, and with excellent results, as an application in various skin-diseases and in glandular tumours—caused the death of a patient. The case referred to was one of scabies. The patient was rubbed with the soap, and a general acute dermatitis followed, which ended fatally.

2241. *Damsch on Inoculation of Leprosy.*—Otto Damsch (*Monatsh. für Prakt. Derm.*, No. 9, 1883) has continued the attempts begun by Neisser and Koebner to inoculate animals with leprosy. The material which he used was obtained from a man who had become infected on the Sunda islands. Blood, lymph, and urine-sediment during attacks of hæmoglobinuria, were injected, whilst portions of leprous tissue were transplanted, the animals employed being rabbits and cats. In some of these experiments, transplanted portions of leprous tissue remained recognisable for months in the bodies of the animals; in some parts they had apparently increased in size, and produced inflammatory changes in their vicinity; but general infection with leprosy, or even a localised leprous tumour, was not produced.

2242. *Behrend on Urticaria Factitia.*—Dr. Behrend (*Monatsh. für Prakt. Derm.*, No. 9, 1883) exhibited to the Berlin Medical Society, in April last, a case of urticaria factitia in a woman, aged 52, who was not hysterical. Only mechanical (not electrical) stimuli provoked the characteristic exudation—œdematous swelling after rubbing the skin with a blunt surface. For example, the pressure to which the soles of the feet are subjected in walking soon produced itching, redness, and such a degree of swelling that the patient was forced to keep her bed.

2243. *Günther on Absorption through the Skin.*—Dr. Günther (*Corresp. Blätt. für Schw. Aerzte*, 1883, No. 9; abstract in *Monatsh. für Prakt. Derm.*, 1883, No. 9) has made experiments on the absorption of aqueous, ethereal, and alcoholic solutions through the human skin, skilfully contrived to guard against fallacies, with positive results. The leg and foot were enclosed in a box and completely isolated by closely fitting caoutchouc. When a 1 per cent. ethereal solution of pilocarpin was applied in the form of spray the characteristic effect of the drug was obtained. Applied in the same way, apomorphia produced nausea and feeling of indisposition, although not positive retching.

2244. *Leloir and Cornil on the Nature of Lupus.*—Leloir and Cornil (Leloir, *Recherches sur l'Inoculation du Lupus—Comptes Rendus Hebd. de la Soc. de Biol.*, Jan. 13, 1883; Leloir et Cornil, *Recherches Expérimentales et Histologiques sur la Nature du Lupus—Ibid.*, Aug. 4, 1883; abstract in *Monatsh. für Prakt. Derm.*, No. 9,

1883), after M. Leloir had inoculated guinea-pigs with lupus tissue with negative results, instituted a second series of inquiries. Portions of lupus-tissue, about the size of a bean, removed from patients who presented no signs of tubercular disease, were inserted into the peritoneal cavity of sixteen guinea-pigs. In two others the experiment was made with portions of lupus erythematosus tissue, and further small portions were inserted into the anterior chamber of the eye in four rabbits. When the report was made to the Société de Biologie, one of the guinea-pigs had died and nine had been killed. Three of them were found to be tubercular, tubercle-bacilli being found in the affected organs. Of those inoculated with lupus erythematosus, one died of general miliary tuberculosis after two months. Tubercle-bacilli were found only once in lupus-tissue.

2245. *Behm on Intra-uterine Vaccination.*—Behm (*Zeitschr. für Geburtshülfe und Gynœkologie*, Vol. viii., Heft 1, 1882; abstract in *Monatsh. für Prakt. Derm.*, Vol. ii., No 7 and 8) vaccinated 33 pregnant women during the latter term of pregnancy; in 22 with success; in 7 with partial success; in 4 without result. Of the 33 infants which were born, 25 were successfully vaccinated; in 8, vaccination was without result. Behm concludes that intra-uterine vaccination is possible, but that it rarely occurs.

2246. *Zimmerlin on an Epidemic of Herpes.*—Zimmerlin (*Korrespon. Blätt. für Schweizer Aerzte*, March 15, 1883; abstract in *Monatsh. für Prakt. Derm.*, No. 10, 1883) from the end of November 1882 to the end of January 1883, observed thirty cases of herpes (mostly facial, of which the majority were labial—one preputial), of which sixteen occurred amongst the medical and nursing staff, convalescents, and patients of one wing of the hospital at Basle. Amongst the subjects in good health, the affection five times accompanied a cold in the head and occurred eleven times without any other symptoms of illness. In all the cases, the symptoms were mild and lasted only a short time. The interest of the communication lies in the etiology, which points with great probability to a miasma, rendered probable by a detailed description of the conditions associated with the particular wing of the hospital.

2247. *Brocq on Bouton de Biskra.*—Dr. Brocq (*Annales de Derm. et de Syphiligraphie*, Vol. iv., No. 9) describes a case of bouton de biskra observed in a soldier who had been in Algeria. Although resembling in some respects syphilitic tubercles, the differential diagnosis was established on clinical grounds alone, and confirmed by the failure of fifteen-grain doses of iodide of potassium thrice daily to change the condition.

2248. *Lemoine on Lichen Planus.*—Lemoine (*Annales de Derm. et de Syphiligraphie*, Vol. iv., No. 6) gives a minute description of the histological changes found in lichen planus. He concurs with Balzer in believing that the disease takes its origin in the sheath of the blood-vessels. It is probable that the arterioles and the capillaries of the deep part of the derma are first affected, and that those of the papillary layer are so only secondarily. The nutrition of the muscles of the glands and of the hairs being imperfectly performed, these organs are altered in their turn and lose their physiological properties. The secretion of sweat no longer takes place, for the sweat-glands are no longer situated in the lymphatic atmosphere from which they derived the material on which they act: the sebaceous glands disappear, the hair-papillæ become sclerosed. The epidermis is affected last; for, its nutrition being naturally less active than that of the other parts of the skin, it can resist longer. But it is inflamed in its turn, and becomes the seat of an excessive production of horny epithelium, which on the one hand accumulates on the surface as scales, and on the other dips downwards into the cutis like the epithelial growths in papillomata.

2249. *Landouzy on Herpes Zoster and Zoster-like Exanthems.*—Landouzy (*Semaine Médicale*, Sept. 20, 1883; abstract in *Annales de Derm. et de Syphiligraphie*, Vol. iv., No. 10), in a lecture on herpes zoster, advances the idea that the disease is not a purely local and accidental affection, but is the local expression of a general malady, of an infectious nature. He lays stress on the fact that a second attack of zoster is seldom witnessed in the same person, so far bringing it into analogy with the eruptive fevers. As in the exanthemata, the eruption is preceded by febrile symptoms. He even cites cases to show that the disease is infectious. He does not consider that it is allied to the other zoster-like eruptions, such as herpes labialis.

2250. *Besnier on Lupus and its Treatment.*—M. Besnier (*Annales de Derm. et de Syphiligraphie*, Vol. iv., Nos. 7 and 8) insists on the connection between lupus and tuberculosis. In June and July 1883, amongst thirty-eight patients under his treatment for lupus at the St. Louis, eight presented well-marked physical signs of phthisis. The author insists on the destruction of the diseased elements by appropriate local measures, and states that he has found ignipuncture with the thermo-cautery, and better with the delicate instruments of electro-cautery, at least equal to scarification with the lancet. He has had made for him, by the Parisian instrument-maker Mathieu, sets of simple and multiple needles adapted for the various conditions of lupus as it is observed on different parts. The cicatrices which result from this treatment are smooth and yielding.

2251. *Sherwell on Paget's Disease, or Malignant Papillary Dermatitis.*—Dr. Sherwell (*Trans. of the Amer. Dermatological Assoc.*, 1883) reports two cases of this disease observed in America. One of the cases (Case 2) has been recorded in the *Jour. of Cutaneous and Venereal Diseases*, March 1883, and is, according to the statement of Dr. Sherwell, the first placed on record in the United States. Rose N., aged 49, married, childless, of good family history, stout, robust, presented herself Jan. 1883. The centre of the right breast revealed a weeping surface; there was itching and occasional burning; the patch measured two by three inches. Paget's description was said to cover the case exactly. Ablation was advised, but the patient refused to consent. It was then treated with acid nitrate of mercury, on account of an alterative action it is believed to possess. The patient made a fair recovery. After three days, profound ptyalism set in. At her last visit there was much scar-tissue, but upon the site of the nipple there was a lesion similar to the old process. The conclusions were as follows. 1. The subjective symptoms—itching and burning—are those of eczema, and not of ordinary carcinomatous affection, but more marked than those of ordinary eczema. 2. The objective appearances—discharge, crusts—are indistinguishable from those of eczema; the colour

of the surface is perhaps more livid. 3. The 'melting away' of the nipple best describes its gradual obliteration, there seeming to be no manifest erosion or ulceration. 4. The retraction of the nipple or tissues beneath is not so marked as in ordinary cancer. 5. The 'malignant papillary' feature is a very diagnostic point, and would of itself instantly resolve any doubts between it and true eczema. 6. In the first case twelve years elapsed from the attack to death, the latter event not seeming in any way connected with the skin-lesion. In the second case, considerably over the time mentioned by Paget as certain to bring out epitheliomatous features (two years) had elapsed.

2252. *Duhring on a Case of Ainhum, with Microscopic Examination.*—Dr. Duhring (*Trans. of the American Dermatological Association*, 1883) reported a case which had been sent to him by Dr. G. B. Simpson, of Weston, West Virginia. The patient, a negro, 40 years of age, noticed when 10 years old a furrow in the digito-plantar fold of the little toe on both feet. The toes gradually enlarged, with pain in the furrow. When first seen by Dr. Simpson, ten years ago, the toes seemed nearly amputated. Two years ago one toe fell off spontaneously. The patient insisted upon its being buried. A few months ago the other toe dropped off, and was preserved by the physician for examination. The father of the patient lost both toes in a similar manner. The mother was at present suffering from the same affection. These facts would seem to indicate an hereditary tendency. The microscopic examination made by Dr. Duhring's assistant, Dr. Henry Wile, may be summarised as follows. 1. There was increase of thickness of epidermis. 2. There was enlargement and elongation of the papillary body. 3. The blood-vessels of the papillary body, also the circumvascular spaces, were dilated and filled with red and white corpuscles. 4. The meshes of the connective tissue of the corium contained larger and smaller clusters of small round cells, which for the most part immediately surrounded the blood-vessels. In some places, the cells composing these cellular collections had gone on to organisation, forming connective tissue. 5. The lower layers of the corium were composed of loosely arranged bundles of connective tissue and smooth muscular tissue, between the bundles of which were variously sized empty spaces. 6. Blood-vessels were everywhere numerous. The arteries, capillaries, and vesicles were dilated, and filled with blood-corpuscles. The veins were for the most part empty. 7. In the walls of the larger arteries there was a noticeable thickness of the media and adventitia and proliferation of the epithelioid lining. 8. The lymphatics were distended, but mostly empty. 9. The sweat-glands were numerous, but atrophic. 10. About the coils of sweat-glands were numerous fat-vesicles and round alveoli, filled with lymphoid cells. 11. The tissue attached to the pedicle was composed of connective and yellow elastic tissue, closely packed together. 12. The epidermis was observed to descend with steplike processes to the place of attachment. 13. Altogether, the general impression obtained from a careful study and comparison of sections was one that would be conveyed by the study of a tissue which was the seat of a chronic inflammatory œdema. The cause of the disease is supposed to be a disturbance of the circulation which was intermittent in its action. Dr. Sherwell, in the discussion, said that he had treated many natives from the West Indies for various cutaneous disorders, and had heard of an affection called 'ring-toe'—a species of self-mutilation practised by the lazy negro. It was his impression that ainhum is the result of a wilful injury, akin, if not identical, with 'ring-toe.'

2253. *Morris and Henderson on the Ringworm Fungus.*—Mr. Morris and Dr. Henderson (*Jour. of the Royal Microscopical Society*, 1883) have cultivated the ringworm fungus with gelatine peptone, and from their experiments draw the following conclusions. 1. The spores of trichophyton tonsurans grow freely on the surface and in the substance of gelatine peptone, at temperatures between 15° and 25° C. (59° and 77° F.). 2. The mycelium only will grow on the substance of the jelly, and the hyphæ require air to produce conidia. 3. The branching, formation of septa, and fructification are identical with those of penicillium. 4. The spores of the second generation reproduce ringworm on the human skin. 5. Outgrowths resembling 'resting spores' appear on some of the filaments.

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DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

2254. ARMANGUÉ.—Pseudo-gastric Epilepsy. (*El Siglo Medico*, Dec. 30, 1883.)

2255. DE RENZI, PROF.—Prompt and Complete Cure of some Paralyses Caused by Cerebral Hæmorrhage. (*Rivista Clinica e Terapeutica*, Jan. 1884.)

2256. BALOGH.—On the Centre of Epileptic Attacks. (*Giorn. Inter. delle Sci. Med.*, Fasc. 8, 1883.).

2257. LUZZATO.—Tendon-Reflex. (*Gazz. Med. Ital. Prov. Venete*, and *Annali Univ. di Med.*, Nov. 1883.)

2258. JENDRASSIK.—Tendon-Reflexes. (*Centralbl. für die Med. Wiss.*, Dec. 8.)

2259. ERB.—The Etiology of Tabes Dorsalis. (*Centralbl. für die Med. Wiss.*, 1883, No. 50.)

2260. ZEDERBAUM.—Nerve-Stretching and Pinching. (*Centralbl. für Klin. Med.*, 1883, No. 51.)

2261. MORIN.—A Case of Hemichorea without Hemianæsthesia. (*Le Progrès Méd.*, No. 2. 1884.)

2262. MOLLIÈRE.—Death during a Hysteric Paroxysm. (*Jour. de Med. et de Chir. Prat.*, No. 1, 1884.)

2263. MARIE.—Amyotrophic Lateral Sclerosis. (*Le Progrès Méd.*, No. 1, 1884.)

2264. LEMCKE.—A Case of very Low Temperature after Hæmorrhage into the Medulla Oblongata. (*Deutsches Archiv für Klin. Med.*, Band xxxiv.)

2265. PODREZ, A.—Two Cases of Stretching the Sciatic Nerves in Tabes Dorsalis. (*Vratch*, No. 38, p. 639, 1882, and No. 39, p. 660, 1882.)

2266. SHAKHNOVITCH.—On a Case of Intermittent Paraplegia. (*Vratch*, 1882, No. 32, pp. 537–38.)

2267. LANDOUZY AND DÉJERINE.—A Special Form of General Spinal Paralysis.

2268. NICHOLSON.—A Case of Epilepsy with Suppuration of Cervical Glands; Incision; Large Dose of Bromide of Potassium. (*Lancet*, Nov. 1883, p. 937.)

2269. BUCCOLA.—General Paralysis of the Insane in Women. (*Lo Sperimentale*, June 1883.)

2270. HAMMOND.—Remarks on Cases of Katatonia. (*Amer. Jour. of Neurology and Psychiatry*, May 1883.)

2271. SPITZKA.—Classification of Insanity. (*Ibid.*)

2272. NEFTEL.—On Atremia, (Virchow's *Archiv*, Band xci.; and *Centralbl. für die Med. Wiss.*, July 21.)

2273. KOWALOWSKI. — Melancholia in Childhood. (*Wiener Med. Blätter*, Oct. 4.)

ART. 2254. *Armangué on Pseudo-gastric Epilepsy.* Dr. Armangué, in the third session of the Certamen Frenopatico of Barcelona, reported two curious cases of pseudo-gastric epilepsy. The first was a man who, with no neurotic antecedents, after injury to the brain with fracture of the cranial bones, suffered from ophthalmic migraine on the same side as the fracture. To this succeeded a partial epilepsy, true Jacksonian epilepsy, localised invariably in the upper extremity of the opposite side. This epilepsy was probably due to the injury of the parietal bone. From a fright or other cause the partial epilepsy became general, but still the attack began always in the arm originally affected. The attack could be sometimes avoided by compression of this arm. In all other respects, this general epilepsy could not be distinguished from so-called essential epilepsy. Some time after being subject to these attacks of epilepsy, a painful gastric affection with hæmatemesis appeared. At first this did not coincide with the attacks of epilepsy, but afterwards always announced or accompanied them. Dr. Armangué considers this case interesting for the following reasons. 1. It is one of those which may be treated by trephining. 2. It shows the relationship which exists between epilepsy and ophthalmic migraine. 3. It is a good example of cortical epilepsy. 4. It proves that Jacksonian epilepsy may be transformed into general epilepsy. 5. The fracture of the parietal bone agrees with the motor centres of the arm, the arm being convulsed in the partial epilepsy of this patient. 6. It is curious from the form of aura which preceded the attacks. 7. No form of postepileptoid paralysis, which is common in this class of attacks, was seen. 8. It might be confounded with gastric epilepsy, but the epileptic attacks preceded the gastric affection by many months. Rather it is to be thought that the gastric pains and hæmatemesis were due to the epilepsy. The hæmatemesis may be compared to the hæmorrhages of the hysterical (neuropathic hæmorrhages), the gastric pains being a prodroma or aura of long duration. The second case is that of an individual who, after a severe fright, began to suffer from gastric pains, and after four months was seized by a first attack of epilepsy. During the first year of his illness, he had attacks of hæmatemesis. The gastric pains accompanied digestion. The epileptic attacks never appeared without the gastralgia. Dr. Armangué shows that in this case the epilepsy was not due to the gastralgia, but that both, as well as the hæmatemesis, started from the fright. The stomach excited the attacks, but did not produce them. It may be considered that in this case the *zona epileptica* was in the stomach. True gastric epilepsy must be caused solely by the affection of the stomach. In all cases in which epilepsy is due to other causes, as injury or fright, although the epileptic attack coincides with gastric disturbance, we have not to do with a gastric epilepsy. At first sight they may sometimes be confounded with this, and therefore he proposes to distinguish these epilepsies by the epithet pseudo-gastric, to distinguish them from true gastric epilepsy, and to indicate the curious variation of gastralgia with epileptic attacks.

2255. *De Renzi on the Prompt and Complete Cure of Paralysis Caused by Cerebral Hæmorrhage.*—Authorities differ greatly as to the time which should elapse after an apoplectic attack followed by paralysis, before commencing treatment by electricity. The general opinion is in favour of allowing some time to pass, so as to permit the absorption of the clot and the subsidence of the inflammatory reaction. Prof. De Renzi (*Rivista Clinica e Terapeutica*, Jan. 1884) on the other hand, thinks that electricity may be employed, if proper precautions are taken, with the greatest success a short time after the attack, that is, in the first week. To the treatment by electricity he invariably adds other means to prevent the return of the hæmorrhage and the development of inflammatory reaction. These consist in the internal use of bromide of potassium, the constant application of cold to the head, and the administration of some drastic purgative whenever there is constipation. The application of electricity exerts an immediate effect on the muscles, which, in the majority of cases, at once regain their contractile power under the influence of the will. S. P. was admitted suffering from cerebral hæmorrhage; on the fourth day of the attack, there was complete paralysis of the left leg. Electricity was applied to the muscles of the thigh, and immediately afterwards the patient was able to bend the limb and to raise the knee for some distance from the level of the bed. On the next day, the patient was unable to extend the limb after bending it; electricity was again applied; he then flexed and extended the leg several times without difficulty. On the sixth day paralysis of the toes only remained, and this also yielded to electricity. The application of electricity ought to be practised directly the rapid and spontaneous disappearance of the paralytic phenomena, which is usually noticed in the first days after an attack of apoplexy, is arrested. The intensity of the current should be very little, and such that it can hardly be perceived by the observer, touching the rheophores with his fingers wetted in salt water. The interruption of the current must be considerable, the greatest that can be obtained with the automatic interrupting apparatus of the electrical machine. The electrical excitement must be limited to the muscles and intramuscular nerves, therefore the two rheophores must be applied successively for a few seconds to the fleshy parts of the various muscles. The duration of each application is from one to several minutes. The instantaneous action of electricity in paralysis from cerebral hæmorrhage is easily explained, by admitting that these paralyses are often neurolytic or suspensive, and that they do not depend on destruction of nerve-elements. The electricity induces in the nerves a negative variation, which extends to the two extremities of the nerve-fibre; so that it overcomes the state of neurolysis determined at the central extremity of the same fibres by the extravasation of blood.

2256. *Balogh on the Centre of Epileptic Attacks.*—Balogh, on the strength of his experiments, holds that it is by the irritation of the cortical grey substance that contractions of separate groups of muscles and even general convulsions are determined. On irritating the grey matter with the induced current, an attack occurred which lasted a short time and then gradually ceased. Irritation of the white medullary substance after removal of the grey matter never caused general convulsions, neither did irritation of the corpus striatum, optic thalamus, corpora quadrigemina, pons Varolii, or medulla oblongata, all of which the author carefully tested. Similar epileptic attacks followed irritation of very different points of the cerebral cortex; although in some animals, from the very same irritation, no result was obtained. The cause of the epileptic attacks is the instability of the cortical

grey matter. To this must be referred the cause of the grave attack, to the corpora striata the cause of the weak attack. In idiopathic epileptic accesses the author admits with Loew and Pokovny, that the molecules in the protoplasm of the nerve-cells of the cerebral convolutions are in a state of extremely unstable equilibrium, so that their disposition is easily disturbed, whence arises a greater development of force. Then the new grouping of molecules produces on one side loss of consciousness, the free force on the other convulsive paroxysms. The repetition of the paroxysms and their heredity even so are not sufficiently explained. Epileptic attacks of another kind proceed from the periphery of the nervous system. These are experimentally and best obtained in calves and rabbits, especially when division of the spinal cord falls between the third dorsal and the third lumbar vertebræ. The parts of the face and neck innervated by the trigeminus of the same part of the lesion, as also those supplied from the second and third cervical nerve, remain without pain, although irritation in these produces attacks of epilepsy. By the production of these epileptogenic zones, following lesion of the cord, epileptic attacks take place. Division of the root of the sciatic nerve also, or else the traumatic action, produces epileptogenic zones with their attacks. These may remain until the lesion is cured. It is thus established that the original cause consists in a molecular change of the nerve-protoplasm. The hyperæmia, sclerosis, &c., are consecutive to the fundamental morbid process.

2257. *Luzzato on Tendon-Reflex.*—The author refers to the opinion of Jendrassik (*Gazz. Med. Ital. Prov. Venete*, and *Annali Univ. di Med.*, Nov. 1883), who maintains that the knee and foot phenomena are facts of different nature and import; the first is reflex in kind (the crural nerve being centripetal and centrifugal, and the lumbar medulla the diastaltic centre); the second, on the other hand, is not reflex. It is caused by the struggle between two opposing forces; one being the flexion of the foot, tending to relax the muscles of the calf; the other a spastic tonic contraction of the soleus, undergoing relaxation from time to time because of the force opposing it. In normal cases it is wanting, because the spastic tension of the calf-muscles is absent. The author insists on the impropriety of calling both these tendon-reflexes, and says that the distinction is confirmed by the fact that a phenomenon corresponding to that of the foot can be obtained in the region of the knee (in a patient suffering from spastic paralysis he obtained the usual knee-jerk, and, striking with the leg extended, a tremor very similar to the so-called foot-phenomenon). With percussion of the tendo Achillis, one may obtain a phenomenon similar to that of the knee. This is obtained more easily when the patient lies face downwards, the foot being flexed, and, striking the tendo Achillis, at every stroke the heel is raised by contraction of the calf-muscles. This phenomenon occurs in health, and is the true reflex of the tendo Achillis. The author found it wanting, as was that of the patella, in a case of ataxy; the nerve of incidence and of reflexion in the sciatic, the centre of reflexion, must be found lower than that of the patella in which the course followed is that of the crural. There are thus four of these phenomena—two at the knee, two at the tendo Achillis; the reflex of the knee (leg flexed) is coupled with the true reflex of the tendo Achillis, and between them there is greater analogy than between the other two. Spinal epilepsy seems of a different nature from these reflexes, which belong to those phenomena which Gowers qualifies as deep reflexes, while spinal epilepsy is determined by irritation of the skin, and not of the deep parts, at least, in some cases. The author refers to a case of spinal affection, in which diffuse tremors were determined in the lower limbs by the smallest causes, and sometimes spontaneously; but after an epileptiform access the tremors ceased, and then reappeared until they again disappeared after another epileptiform access; these alternations were repeated five times. In this case, there seemed to exist a greater irritation of the grey substance of the spinal cord, which, arriving at a certain grade, was diffused to the medulla oblongata, provoking an epileptiform access followed by a period of greater calm. Spinal epilepsy would be then of reflex nature, but of a different nature to that of the knee or foot. Without accepting definitely the opinion of Jendrassik, according to whom the foot-phenomenon would not be a reflex fact, and without touching the question as to whether the analogous phenomenon which occurs on striking the knee with the leg extended is of the same nature, the author says that his two cases show that the tremor provoked by the dorsal flexion of the foot is different from spinal epilepsy, and notes also some intermediate forms in the series of the phenomena in question.

G. D'ARCY ADAMS, M.D.

2258. *Jendrassik on Tendon-Reflexes.* — The *Centralbl. für die Med. Wiss.*, of Dec. 8, gives Jendrassik's conclusions on this subject, based upon experiments of the various conditions necessary for the presence or absence of tendon-reflex. 1. The knee-jerk is a true reflex, caused by mechanical irritation of the nerves which lie in the patellar tendon. 2. The muscle must be in a condition of passive tension; up to a certain point the amount of contraction is proportionate to the degree to which the muscle is stretched. 3. Voluntary innervation of the crural nerve lessens the reflex or prevents it altogether. Contraction of the muscles innervated by the great sciatic not only does not hinder the knee-jerk, but even favours it. 4. The path of the reflex action in the spinal cord is through the grey substance only; lesions of the white cannot be regarded as direct causes for the failure of the reflex action. 5. Physiological increase of tendon-reflexes appears on innervation of other muscles of the body; simultaneous raising of weights, or powerful stretching of muscles increases the reflex contraction. 6. Pathological increase of tendon-reflexes may in most cases be regarded as the result of interruption of the inhibitory influence of the brain on the spinal cord. 7. The author does not regard the foot-phenomenon as a reflex action, but explains it as a *tonic* spasm, caused by the mechanical irritation of the sudden stretching of the soleus; the irritability of the muscle must be raised to produce this. Stretching of the crural nerve in five cases in rabbits left the patellar tendon-reflex intact, even when the stretching was gradually increased till the nerve was torn.

2259. *Erb on the Etiology of Tabes Dorsalis.*—Erb's conclusions on the syphilitic origin of tabes dorsalis, are thus summarised from his second series of a hundred cases (*Centralbl. für die Med. Wiss.*, 1883, No. 50). There were 9 cases without preceding syphilis, 62 with decided secondary syphilis, and 29 with chancre, but without secondary symptoms, making 91 per cent. of syphilitic cases. Of patients

out of the lower classes, 14·3 per cent. were not syphilitic, and 86·7 were so (*i.e.* 3 to 18 in 21 cases). As to the time of the appearance of tabes after infection, in 69 of the 91 cases it occurred within the first fifteen years, in 15 cases it followed in the next lustrum, in 6 cases it was still later. In a controlling investigation of 1,200 persons (men over 25 years of age) who were not suffering from tabes or immediate syphilis, 74¼ per cent. were non-syphilitic, and 22¾ per cent. had been previously infected. Erb considers that this clearly shows that hardly any one is likely to have tabes dorsalis who has not had syphilis. Further, in investigating 100 cases as to any preceding lesions, it was found that in 36 there had been syphilis (or chancre) alone; in 57 there was syphilis together with other causes (fatigue, chills, excesses, &c.); in 7 cases the only ascribable causes were fatigue, chills, injuries, and excesses. Of 13 tabetic women, 4 were free from syphilis; in 3 there was doubt on the subject; 4 had decided secondary symptoms; 1 had a chancre. Upon the whole, Erb considers it a justifiable deduction that syphilis is one of the most important of the causes of tabes dorsalis, if not the most important.

2260. *Zederbaum on Nerve-Stretching and Pinching.*—Zederbaum (*Centralbl. für Klin. Med.*, 1883, No. 51) made experiments upon nerves of rabbits by loading the nerves with various weights, and by compressing them, and he obtained the following results. The sciatic nerve can endure heavy loading without derangement of its motor functions; and small weights, up to 75 grammes, had no effect at all. A moderate weight—the maximum lay at about 500 grammes (1 lb.)—increased the motor excitability, which increase did not persist when the weight was removed. A higher weight (about 900 grammes or more) does away with the motor excitability. The reflex excitability disappeared long before the motor—viz., at about 400 grammes; this does not agree with Lüderitz's results. The weight required to abolish the reflex excitability is greater the more slowly it is increased, and the reflex excitability thus abolished does not reappear on removing the weight. This excitability is also abolished by smaller weights, if allowed to act long. It is a remarkable fact that, after loading or compressing the nerve, the reflex excitability of the opposite limb (in rabbits of the fore limbs also) is increased. All the above experiments were repeated on rabbits with the brain removed. In these animals, the knee-jerk disappeared permanently on compressing the sciatic nerve. The compression had no influence upon the usual consequences of transverse section half through the spinal cord (Brown-Séquard).

E. J. Edwardes, M.D.

2261. *Morin on a Case of Hemichorea without Hemi-anæsthesia.*—Morin (*Le Progrès Méd.*, No. 2, 1884) reports the case of a man, aged 67, who was suddenly attacked by left hemichorea without hemianæsthesia. He died seventeen hours afterwards, the movements, which were very violent, having persisted until death. At the necropsy he found slight atheroma of the anterior and posterior cerebral arteries, and some old and very small hæmorrhagic foci in the external segment of the lenticular nucleus of the left hemisphere. In the right hemisphere several old hæmorrhagic foci, and one recent, of the size of a pin's head, in the lenticular nucleus. In the posterior part of the optic thalamus, there was a hæmorrhage, linear in shape, 3 millimètres long, directed obliquely from without inwards, and from above downwards, and separated by 1½ millimètres of grey matter from the surface of the thalamus. The internal capsule was absolutely intact. As a rule, in similar cases, lesions have been found in both the grey and the white matter; and this necropsy supports the opinion of M. Vulpian, who localises the lesion in the optic thalamus, and is opposed to that of M. Raymond, who places it in the internal capsule. No doubt the effects of compression might be masked, but in view of the limited nature of the hæmorrhage it would be very improbable.

2262. *Mollière on Death during a Hysteric Paroxysm.*—Cases of death during a violent paroxysm of hysteria have been recorded, but generally without excluding the possibility of some lesion of the brain or medulla, or an attack of puerperal convulsions. Mollière's case was a woman whose first attack came on when she was 56; they were violent, accompanied by arrest of the pulse and respiration. After one of these she was found dead in her bed. The necropsy was made most carefully, and gave absolutely negative results. This case may be added to the others which go to prove that sudden death in these circumstances is due to asphyxia.

2263. *Marie on Amyotrophic Lateral Sclerosis.*—M. Pierre Marie, at a meeting of the Société de Biologie (*Le Progrès Med.*, No. 1, 1884) gave an account of the necropsy of a case of amyotrophic lateral sclerosis, which had been under the care of M. Charcot. The patient, a woman, had been ill for one year. At the necropsy, in the spinal cord they observed not only disappearance of the large cells of the anterior horns, but numerous granular bodies situated very exactly in the region of the direct and crossed pyramidal tracts; these could be traced through the pons Varolii, the peduncles, and the internal capsule, to the point considered by Flechsig and Charcot as giving passage to the fibres of the pyramidal tract. Beyond, they could be traced in the white substance of the ascending frontal and parietal convolutions, in which they were arranged in lines, and formed radiations directed from the cortex towards the internal capsule. In the motor area of the cortex the great pyramidal cells had disappeared, a new proof of the 'systemic' character of the lesion. In fact, as M. Charcot has always maintained, in spite of opposition, notably from Leyden, is it not a very 'systemic' lesion which affects in its whole length a cerebro-spinal system of fibres which have already been shown by developmental anatomy to be perfectly distinct from other systems of fibres in the brain or cord?

2264. *Lemcke on a Case of very low Temperature after Hæmorrhage into the Medulla Oblongata.*—Lemcke (*Deutsches Archiv für Klin. Med.*, Band xxxiv., Heft 1) reports the case of a drunkard, aged 38, in Professor Thierfelder's clinic at Rostock, who had a rectal temperature of 23° C. (73°·4 F.) without any well-marked signs of local disease or mental disturbance. Twenty-seven hours after admission he died, apparently from œdema of the lungs. *Post mortem* examination showed on the left side, and near the middle line and upper surface of the floor of the fourth ventricle, traces of a recent hæmorrhage, which further above led to a focus which lay 3 millimètres to the left of the middle line and 1½ millimètres beneath the floor of the fourth ventricle. It was 1 to 1½ millimètres in breadth, and was situated to the side of the bulbar nuclei and above the nucleus of the vagus nerve, and within and somewhat below the median superior nucleus of the

N. acousticus. Lemcke believes, on the grounds of this observation and of other cases in which abnormally low body temperatures in similar lesions of the medulla have been found, that the locality of the lesion closely approximates to the seat of the thermal centre. ROBERT SAUNDBY, M.D.

2265. *Podrez on Two Cases of Stretching the Sciatic Nerves in Tabes.*—Dr. A. Podrez (*Vratch*, Nos. 38 and 39, 1882) records two cases of tabes, in each of which he stretched the sciatic nerves on both sides. In one of the patients, aged 45, with symptoms of eleven years' standing, considerable relief followed the operation, the improvement taking place gradually within four months. Darting pains, vesical weakness, and indistinctness of speech entirely disappeared. In the upper extremities only a slight tremor persisted, while before the operation the patient could not perform any of the finer movements, in consequence of violent tremor and want of co-ordination. The atactic gait also improved, though far less considerably. Less fortunate were the results in the other patient, aged 38, with tabetic symptoms of four years' duration. The operation, performed under the same strict antiseptic precautions, and generally exactly in the same manner as in the first case, was immediately followed by rigor and evening rise of temperature to 41°·3 C. (104°·35 F.), by extreme general weakness, and six days' neuralgic paroxysms. From the tenth day after the nerve-stretching extensive and deep bed-sores began to develop, and by the end of the sixth week the patient died.

2266. *Shakhnovitch on a Case of Intermittent Paraplegia.*—In the *Vratch*, 1882, No. 32, p. 537, Dr. Shakhnovitch describes a very interesting case of a patient, aged 44, of a strong build, with a powerfully developed muscular system, of splendid general health, who for twenty-five years has suffered from intermittent paraplegia. The patient's father had the same curious affection, and, as the author alleges, succumbed in his fifty-fourth year exclusively from increase in the frequency of the paralytic attacks. The patient's brother is epileptic. According to the patient's assertions, the first paralytic attack appeared a few hours after exposure to cold. The attacks come in intervals varying from a few hours to two months; they commence invariably during sleep. He awakes, already struck by complete paralysis in all four extremities, consciousness being perfectly retained, and no pain or any unpleasant sensations being felt. Speech, sight, hearing, smelling, and taste; tactile, painful, and thermic sensibilities, and the bladder and rectum, remain thoroughly normal. Reflexes are abolished; the muscles of the body and extremities are stiff and hard to the touch. By the end of from three to twelve hours the patient falls asleep, and on awaking feels only numbness in the extremities, which passes away in about two hours, or—when he begins to make energetic movements, or undergoes shampooing—in half an hour. The patient is intelligent and cheerful, and leads a very active life. He never suffered from malarial fever, therefore his case cannot be placed together with the cases of intermittent paraplegia, published by Hartwig, Macario, Romberg, and Gibney (see the LONDON MEDICAL RECORD, July 1882, p. 291). Dr. Shakhnovitch thinks that he has discovered a new form of neurosis, which he proposes to call 'paraplegia spinalis intermittens nervosa.'

V. IDELSON, M.D.

2267. *Landouzy and Déjerine on a Special Form of General Spinal Paralysis.*—Messrs. Landouzy and Déjerine have recently described a form of general spinal paralysis, which is chiefly characterised by its rapid evolution and its curability. For a few days the patient (generally an adult, but sometimes a child) is deprived of the use of his legs and arms; the paralysis begins in the lower extremities and travels upwards, but never reaches the face, and is not accompanied by spasms; there is no anæsthesia, and the sphincters are not implicated. After a short time the paralysed muscles waste rapidly, and the disease remains apparently stationary for some weeks. Then a gradual return of the movements and a corresponding diminution of the atrophy take place, and after some months all the symptoms have disappeared. The disease must not be mistaken for the acute spinal paralysis of the adult, which begins more suddenly, and is almost always accompanied by fever. It must be noted, also, that in the curable form all the muscles of the extremities are equally and symmetrically atrophied and paralysed, which is not the case in the acute form. The best treatment consists in tonics, hydrotherapy, and electricity.

J. S. KAESER, M.D.

2268. *Nicholson on a Case of Epilepsy with Suppuration of Cervical Glands; Incision; Large Dose of Bromide of Potassium.*—Mr. Nicholson, in the *Lancet*, Nov. 1883, p. 937, records the case of an idiot boy, aged 11, who had suffered for eight years from epilepsy. When first seen, the boy was taking ninety grains of bromide of potassium without any appreciable effect. There was great emaciation, and also suppuration of the cervical glands of the left side. An incision was made into the abscess of the neck, and shortly afterwards the boy, obtaining possession of his medicine bottle, drank off two ounces and a half of solution of bromide of potassium at a dose. After this the fits entirely ceased for ten weeks, when the patient was lost sight of. Was the improvement due to the opening of the abscess or to the dose of bromide, or did the fits stop of their own accord in the ordinary course of events? RICHARD NEALE, M.D.

2269. *Buccola on General Paralysis in Women.*—The author says (*Lo Sperimentale*, June 1883) that Neumann's assertion that general paralysis occurs only in men is not now accepted by any but those who are ignorant of elementary clinical facts. He has himself observed fourteen cases in women in one year at the Turin Asylum, an institution that has an average of 240 patients resident. These, with one case of Prof. Morselli's, he has carefully analysed. The ages, with two exceptions, ranged from 38 to 50 years. The predominant elements in regard to causation were cessation of the menses, excesses of various kinds, trouble, and heredity. The chief characteristics of the disease in women as distinguished from men were its slow course, and dementia instead of delusions of grandeur. The average duration of the cases was between three and four years. Not one instance was observed of the form of mental disorder usually seen in men affected with the disease. Dementia was the prevailing feature of the change in mind. The author thinks this a significant fact. He believes that it shows a relative weakness of intellectual capacity in women. From such poor mental soil as women possess only weakness can spring, he tells us, while it is a difficult thing to organise the classical delusions of the disease as seen in men. The melancholic variety of general paralysis was

met with twice. Epileptiform convulsions were observed in two instances. A noteworthy phenomenon is the variation the temperature undergoes throughout the disease. The variations are never very great, ranging from 36° to 39° C. (96°·8 to 102°·2 F.). A rise in temperature is accompanied by an aggravation of the clinical symptoms, and lasts usually about a day or two.

2270. *Hammond on Katatonia.*—At the New York Neurological Society, Dr. Hammond read a paper (*Amer. Jour. of Neurol. and Psychiatry*) on this disease, first described by Kahlbaum. It is a form of insanity characterised by alternate periods, more or less regular, of mania, melancholia, epileptoid and cataleptoid states, with delusions of an exalted character and a dramatic tendency. The name given by Kahlbaum, katatonia, is intended to express the depressed physical and mental tension. The disease is very much more common in men than in women. Dr. Hammond gives bromide of sodium, and he regards the prognosis as favourable. Dr. Spitzka, on the contrary, thought the patients were exceedingly likely to relapse or to die of pulmonary affections. There is a monograph on the disease by Dr. J. G. Kiernan.

2271. *Spitzka on the Classification of Insanity.*—Dr. Spitzka read a paper (*Amer. Jour. of Neurol. and Psych.*) before the same society on the classification of insanity. It is a valuable contribution to the subject; but it could hardly with advantage be presented in abstract. It deserves to be read entire. WILLIAM R. HUGGARD, M.D.

2272. *Neftel on Atremia.*—Dr. W. Neftel (Virchow's *Archiv*, Band xci., and *Centralbl. fur die Med. Wiss.*, July 21), offers an addition to our nosology, in a morbid condition, which he regarded as peculiar to the American nervous constitution. The etymology of the term as given by Dr. Neftel is:—ἀ privative, and τρέμω, I tremble. The affection described is an utter disinclination to bodily exertion, without the existence of any obvious cause. The intellect remains unimpaired. The malady, which is more or less chronic, appears to consist in a form of melancholia. It is an hereditary affection, most commonly met with in women of middle or advanced age, seldom in men, and is often combined with hysterical hypochondriasis. It assumes sometimes a periodical character, disappearing and returning. Disorders of the sexual organs may accompany, but do not cause this nervous affection. The author considers the prognosis to be unfavourable. The treatment, he adds, should be a combination of psychical and medicinal means.

W. B. KESTEVEN, M.D.

2273. *Kowalowski on Melancholia in Childhood.*—The *Wiener Med. Blätter* of Oct. 4 mentions a case of melancholia in childhood, communicated by Prof. Kowalowski, of Charkow. The patient was a boy, aged 11, with no hereditary tendency to illness, but who had developed slowly, and was still weak, thin, and ill-nourished. In November 1880 he had scarlet fever, followed by diphtheria and inflammation of the lungs; and, although after his recovery he again attended school, he was very irritable, and occasionally suffered from night terrors. In the end of March he had the measles, after which he lost all interest in everything, and became very low-spirited, imagining himself to be much ill-used and persecuted. When he came under observation in December 1881, he was extremely apathetic and indifferent, answering questions slowly, and sometimes not at all; he had the idea that he must die, and the fear of being forsaken was strongly prominent in his mind. He also suffered from constipation, loss of appetite, and sleeplessness. Proper nourishment was prescribed, with cod-liver oil, warm baths, and plenty of fresh air, and in five months he left the hospital cured. The case seems to support the view of Meynert, that melancholia is dependent on cerebral anæmia.

ALICE KER, M.D.

OPHTHALMOLOGY.

RECENT PAPERS.

2274. GALEZOWSKI.—On Detachment of the Retina. (*Recueil d'Ophthalmologie*, Nov. and Dec. 1883.)

2275. SMITH.—On Reflex Amblyopia and Thrombosis of the Retinal Artery. (*Ophthalmic Review*, Jan. and Feb. 1884.)

2276. RUSSELL.—On Exophthalmic Goître. (*Ophthalmic Review*, Nov. and D c. 1883.)

2277. GUAITA, L.—A Case of Blennorrhagic Ophthalmia treated with Iodoform. (*Gazz. Med. Ital. Lomb.*, Oct. 27, 1883.)

2278. QUAGLINO.—On the Pathogenesis of Glaucoma. (*Annali di Ottalmologia*, and *Annali Univ. di Med.*, Sept. 1883.)

2279. JALON.—Atrophy of the Optic Nerves after Mumps. (*Archives de Méd. Milit.*, Tome i.)

2280. DUJARDIN.—Apoplexy of the Retina during Pregnancy. (*Jour. de Méd. et de Chir. Prat.*, 1883.)

2281. BARABASHEFF, P. N.—Echinococcus of the Orbit. (*Vratch*, 1883, No. 1, pp. 3-4.)

ART. 2274. *Galezowski on Detachment of the Retina.* Galezowski, in two papers (*Recueil d'Ophthalmologie*, Nov. and Dec. 1883), maintains that liquefaction of the vitreous body must necessarily precede a detachment of the retina, and that the immediate exciting cause is a circumscribed serous inflammation of the ciliary body or choroid. In favour of the first proposition, he quotes his own observation of long ago that in detachment of the retina the vitreous humour is always unduly fluid, and that this degeneration is often limited to a particular area, sometimes to a sector, or to the outer half of the choroid, or even to several isolated points of the vitreous body. It is the posterior segment in the neighbourhood of optic disc and macula that most often shows degeneration, and this favours materially the production of floating opacities by the rupture of choroidal or retinal vessels. If the vitreous body were, on the other hand, of normal firmness, these flocculi could never have been formed, but absorption of the effused blood from the retinal surface or substance must have taken place. A choroidal serous effusion may infiltrate the retina and make it more prominent, but without a detachment, since the vitreous body has not been previously liquefied. But later, when the vitreous body shall have undergone degenerative changes, and the infiltrated retina is no longer supported by solid vitreous substances, it detaches itself and becomes floating. Thus he explains why choroidal sarcoma is not always accompanied by detachment of the retina. In the earlier stages of this affection, when the vitreous body is still normal, the retina remains in its place in spite of the exudation of fluid from the choroid. But later, when the progressive changes of the choroid or of the ciliary body have caused liquefaction, then detachment

takes place in the region of the softened vitreous body. A rupture of the internal coats of the eye, or of the sclerotic, may cause an immediate detachment, independent of any loss of vitreous body from the injury, if the eye be myopic and the vitreous fluid. On the other hand, the author fails to find that the same causes may produce immediate detachment in emmetropic or hypermetropic eyes with normal vitreous body. In these last cases, five months or more may pass before the detachment occurs. In favour of this last statement he quotes an interesting case in which, in spite of the grave character of the injury, a detachment of the retina did not develop itself till three months later. In favour of the existence of a circumscribed serous choroido-cyclitis he gives an analysis of the detachments produced by various causes. Out of his total 649 detachments, he has observed it nine times only in sarcoma of the ciliary region. He is certain that the detachment occurs only at a certain period of the growth of the neoplasm. From the observation of three cases, he states that sarcomata springing from the disc or the yellow spot region of the choroid do not give rise to retinal detachment. Hence he argues against mechanical detachment by pressure of the tumour from beneath. Again, when, during cataract operation in a hypermetropic or emmetropic eye, vitreous humour has been lost, the retina does not become detached, the choroid having little tendency to an exaggeration of its secretion. But in myopes this accident almost invariably leads to detachment. He attributes, therefore, everything to the condition of the operated eye and the facility with which the choroidal vessels secrete this serous fluid. In rheumatic and gouty subjects, these accidents occur more readily than in others. Out of his 649 detachments he has observed 131 cases of retinal perforation. Of these he noticed many in which the rupture did not appear till some time after the commencement of the detachment, and it was followed immediately in each case by the appearance of flocculi in the vitreous substance. These flocculi he attributes to the penetration of subretinal fluid into the vitreous substance, for the microscope shows him that their ultimate elements are the same, consisting of blood-corpuscles, epithelium-cells, and coagulated fibrine. Generally speaking, his statistics confirm this view. Thus, out of his 649 detachments he finds flocculi in 120, a number approaching the 131 cases of perforation. He finds retinal detachments to be twice as common in the male sex as in the female. Myopia is twelve times as common as hypermetropia and emmetropia together, even when traumatic detachments are included. Moreover, detachments occur almost instantaneously in myopic eyes, whereas those of hypermetropia and emmetropia are only developed slowly, and are preceded by disturbances and progressive limitations of the vision.

2275. *Smith on Reflex Amblyopia and Thrombosis of the Retinal Artery.*—Mr. Priestley Smith, in two able papers (*Ophthalmic Review*, Jan. and Feb. 1884), thus summarises his conclusions. 1. Blocking of the retinal artery is due in a considerable proportion of cases to spontaneous thrombosis. 2. The causes of this accident are cardiac failure, either from disease of the heart itself or from other causes; spasm of the blood-vessels; disease of the walls of the vessels; alterations in the quality and amount of the blood. 3. Thrombosis may be distinguished from embolism by a history of transient failures of sight resembling the permanent attack in mode of onset, and especially of simultaneous failure of the fellow eye at the moment of onset; also by a history of faintness, giddiness, pain in the head, or other sign of circulatory disturbance at the moment of onset. 4. A distinction between the two causes is important, in relation to prevention and immediate treatment of the attacks. 5. The contraction of the visual field met with in neurasthenic asthenopia (hysterical amblyopia, retinal anæsthesia) is the expression of an impaired nutrition of the retina, not of a central disturbance.

The first and most interesting case which Mr. Smith records is that of a young married woman, aged 24, who, immediately after a fainting seizure, found herself blind of the *left* eye. Subsequently, she had three temporary attacks of blindness of the *right* eye, all which, like the first one, seemed referable to severe abdominal pain. The field of the *right* eye gradually contracted, and the eye became red and watery on any attempt to read. The left disc became atrophic, and the retinal arteries shrunken to threads and for the most part empty. After a thorough examination of the abdominal viscera, ovaritis and dilatation of the left Fallopian tube was diagnosed, and removal of the diseased organs was recommended as the only means of restoring the general health. Twelve days after the operation, which was performed with perfect success, the field of vision of the right eye improved considerably, while the asthenopia diminished. The improvement continued during the five weeks of her stay in the hospital, and three weeks later a further amelioration of her vision as well as her general health was reported. As above seen, the ultimate ophthalmoscopic appearances in the blind eye were those usually following embolism of the retinal vessels. The author explains this interesting case by the supposition that the loss of sight depended on reflected nervous influence, the condition of the ovaries being the exciting cause. Though he thinks heart-failure to be the principal factor in the case, he cannot decide certainly whether the transitory attacks of blindness of the right eye were due to heart-failure merely, or to a spasm of the blood-vessels. He points out that very gentle stimulation of an inflamed peritoneal surface produces marked inhibition of the heart's action, and that, in general, the alimentary tract seems to be in closer connection with the cardio-inhibitory centre than other parts of the body, but that powerful stimuli, however derived, will always produce reflex inhibition. He quotes several other interesting cases in which the symptoms, though of such character as would be usually taken to indicate embolism of a retinal artery, would be better accounted for by thrombosis. The distinction is of importance as regards treatment; for, whereas in embolism no known treatment is of avail, in thrombosis a removal of the predisposing constitutional cause may be of marked service in preventing an attack in the second eye. In recent cases of thrombosis, he would also hope for benefit from massage or from iridectomy or paracentesis.

2276. *Russell on Exophthalmic Goître.*—The author (*Ophthalmic Review*, Nov. and Dec. 1883) adds to the cases previously recorded by Story (*Ophthalmic Review*, June 1883) two other instances in which this disease has shown itself in more than one member of the same family; one, if not two, of the subjects in question being of the male sex. In one of these,

the symptoms, which corresponded in essential points with those of exophthalmic goître, appear to have been dependent on the cutting of a tooth. Such a case, he points out, agrees rather with the theory of central lesion advocated by Fitzgerald (*Dublin Jour. of Med. Science*, March and April, 1883), whether such be a paralysis of the vaso-motor centre for certain parts of the head and neck, or of the cardio-inhibitory centre of the vagus, or of both these, than with the hitherto generally accepted hypothesis of a lesion of the cervical sympathetic. The author has observed twenty-three cases in all, three being of the male sex. In fifteen there was nervous derangement of a general character, such as hysteria, irritability or sleeplessness, and in eight of these fifteen it was so marked as to overshadow the other symptoms. In six cases the rapid emaciation was very striking, and was accompanied or followed in some by singular fluctuations of nutrition. There was no relation observed between these two classes of symptoms, the nervous and the nutritive. Goître was absent in six of the twenty-three cases. Out of these six proptosis was observed in five, and extreme palpitation in four. Among the entire twenty-three cases proptosis was absent or uncertain in four, and in one of these four goître was also absent. The heart-symptoms were present in every case, though in various degree. From these very varied symptoms, and from the marked diversity in their order of appearance, the author leans to the theory which explains the three principal symptoms of Graves's disease, the palpitation, the proptosis, and the goître, by disorder of separate nervous centres. He holds that no general expression of the kind of treatment required can be laid down, till the nature as well as the locality of the lesion is known. And, as he thinks, these may be different in the different cases, the treatment may vary from the removal of peripheral sources of irritation, *e.g.* the pressure of a tooth on the gum, as in the case above referred to, to the administration of tonics in combination with thorough quiet. W. A. Brailey, M.D.

2277. *Guaita on a Case of Blennorrhagic Ophthalmia treated with Iodoform.*—Neither the application of a strong solution of nitrate of silver nor frequent irrigation with carbolic solution (*Gazz. Med. Ital. Lomb.*, Oct. 27, 1883.) had any effect in arresting the rapid progress of a virulent ophthalmia ; nor did Crampton's incisions prevent the participation of the cornea in the morbid process, which assumed the diphtheritic form. The application of iodoform in fine powder quickly arrested the diphtheritic process. In the membranous forms of conjunctival inflammations, iodoform is more potent than any other antiseptic ; it is best applied pure, in fine powder, sufficient to fill the conjunctival cavity ; in the croupous and less grave forms of conjunctival blennorrhagia, it may be applied as an ointment. This should be done at first once every day, and, as the disease abates, every second day is sufficient, the eye being afterwards covered with a pad of iodoform gauze, cotton-wool, and a bandage. If the cornea be attacked, a strong solution of eserine should be instilled. If the application of the iodoform cause pain and sensation of burning, either the iodoform is not finely enough powdered, or it is mixed or adulterated with some other substance.

2278. *Quaglino on the Pathogenesis of Glaucoma.*—The author (*Annali di Ottalmologia*, and *Annali Univ. di Med.*, Sept. 1883) is of opinion that glaucoma, acute or chronic, is always the product of a secretory irritation of the anterior uveal tract, and especially of the ciliary processes, which are above the anterior part of the hyaloid. This process would not be sufficient *per se* to give rise to the morbid facts and the functional alterations proper to this disease, if the equilibrium between secretion and absorption were exact. The inelastic hardness of the sclerotic, from hereditary congenital vice and from atheromatous degeneration of the arterial vessels, is one of the indispensable facts in the causation of the disease. To this last condition is often added obliteration or diminished capacity of the anterior ciliary veins, giving rise to stasis in the venous vessels of the anterior uveal tract. Increased arterial pressure in the carotid and ophthalmic artery from hypertrophy of the left heart, from tumours which press on the abdominal aorta, or from affections of the lungs (pulmonary emphysema, bronchitis, pneumonia, &c.), may contribute to the increase of the intra-ocular pressure. The closing of the lymphatic canal of Fontana, from adhesion of the ciliary portion of the iris to the internal periphery of the cornea, met with in many cases of glaucoma of old standing, appears rather a consequence of the retraction of the iris towards the ciliary body and of consecutive inflammation, than a primitive and initial fact of glaucoma ; the argument that iridectomy helps because it reopens the access to the obliterated lymphatic canal not being conclusive, since the access is little, and not sufficient to unload the exuberant quantity of aqueous humour, which by itself alone constitutes the fundamental condition of glaucoma.

G. D'Arcy Adams, M.D.

2279. *Jalon on Atrophy of the Optic Nerve after Mumps.*—Visual troubles are not frequent in mumps ; the observation published by M. Jalon (*Arch. de Méd. Milit.*, tome i., p. 109), is that of a young soldier who was attacked by mumps and orchitis during a short epidemic. After he had left the infirmary, he noticed that he could not see well with the right eye, and an ophthalmoscopic examination revealed the lesions of optic neuritis. Since that time the atrophy has increased, and the loss of sight has become complete. It is probable that this accident was the consequence of some intracranial mischief secondary to mumps.

2280. *Dujardin on Apoplexy of the Retina during Pregnancy.*—The author reports (*Jour. de Méd. et de Chir. Prat.*, 1883) the case of a pregnant woman, aged 39, who lost suddenly the sight of her right eye. The cause of the blindness was found to be a large retinal hæmorrhage in the region of the macula lutea. There were no signs of retinitis, and the heart and kidneys were healthy, but the patient was of a plethoric constitution. After some weeks a gradual restoration of sight was noticed, and ten months later all the symptoms (subjective and objective) had entirely disappeared.

J. S. Kaeser, M.D.

2281. *Barabasheff on Echinococcus of the Orbit.*—In the *Vratch*, 1883, No. 1, p. 3, Dr. P. N. Barabasheff describes another case of echinococcus of the orbit, admitted to the Charkov Ophthalmic Clinic. His first case may be found in the London Medical Record, June 1883, p. 245. The patient, a soldier, aged 27, presented the following symptoms in his right eye : swelling of the eyelids, ptosis, exophthalmos with displacement of the eyeball outwards and upwards, considerable tumefaction of the

disc, congestion and tortuosity of the veins, vision lost, a painless, fluctuating, smooth tumour behind the eyeball. A puncture removed 7½ drachms of colourless fluid containing traces of albumen, a considerable quantity of chlorides, pigment-granules, and a few epithelial cells. A test for succinic acid gave very doubtful results. Having excluded encephalocele, cyst of the lacrymal gland, and all solid new growths, Professor Hirschmann diagnosed echinococcus, and performed enucleation of the cyst. During removal the sac burst, and about fifteen daughter-cysts were discharged ; the largest of which was of the size of a pigeon's egg. The sac of the mother-cyst was extracted without any difficulties.

V. IDELSON, M.D.

REVIEWS.

ARTICLE 2282.

On Malignant Disease (Sarcoma and Carcinoma) of the Larynx. By HENRY T. BUTLIN, F.R.C.S., Assistant-Surgeon and Demonstrator of Diseases of the Larynx, St. Bartholomew's Hospital. London : J. & A. Churchill.

THIS little work is a continuation of the study of the life history of sarcoma and carcinoma, which for the past ten years Mr. Butlin has undertaken with much perseverance and success. In a former work he has already published some of the results of his labours on 'sarcoma' and 'carcinoma' as they occur in the bones, testicle, &c. In this he confines himself to their study as they occur in the larynx. Mr. Butlin has not only had much personal experience of these growths, having charge of a large special department for diseases of the larynx at St. Bartholomew's Hospital, but he has diligently collected all that he has found published in the English, German, French, and Italian languages. If we are at first surprised at the small number of cases thus brought together, we must remember that Mr. Butlin has very properly excluded all those in which microscopic examination has not been made. Of the cases that have come under his notice or were collected by him, twenty-three were sarcomatous and fifty were carcinomatous, or rather more than double the number of the former. This difference, as the author says, does not show the true numerical relation which exists between sarcomata and carcinomata of the larynx ; cases of the latter, being by far the more common, are for that reason not so frequently reported. Mr. Butlin adopts Krishaber's division for both sarcomata and carcinomata of the larynx in dividing them into extrinsic and intrinsic. The intrinsic variety of both appears to occur much more frequently than the extrinsic. The analysis of a large number of cases, as was to be feared, has shown that Krishaber's statement that intrinsic carcinomata do not affect the glands as long as they are confined to the larynx, does not hold absolutely good. In several cases, at quite an early period, the glands have been found enlarged. The absence of glandular affections in sarcoma of the larynx is held by Mr. Butlin to be probably mechanical. He would suggest that sarcomata of these parts arise from the proliferation of cellular elements of the solid structure of the connective-tissues, and as the cells proliferate the solid structures gradually swell, and the lymphatic vessels suffer a diminution of their calibre, which proceeds to their complete obliteration, and renders them incapable of transmitting the infecting material of the tumour. Although this may be, and probably is, one of the explanations why the glands are not affected, there is no doubt still much more work to be done in this direction.

A valuable fact elicited by Mr. Butlin in his former inquiry was, that the mother-tissue largely influences the degree and kind of malignancy presented by a tumour. He does not attempt to explain why this should be so ; for the present he only insists upon the necessity of making a local study of malignant growths upon a larger scale than has hitherto been done. In the present study a point not brought out in the former sections is perceived, viz. : 'The wide difference which may exist in the course pursued by sarcoma and carcinoma of the same organ, and how even carcinomata arising from different parts of the same organ pursue habitually a very different course even when the structure of the tumour is the same.'

We are glad to see that, for the purposes of diagnosis, the importance of the removal of a small piece of the growth for microscopical examination is insisted on, a proceeding very easily accomplished by any one fairly skilled in laryngeal manipulations.

The facts prominently brought forward, especially as regards treatment, are these. As sarcoma very rarely affects the glands or becomes disseminated, it is a much less formidable disease than carcinoma, and, when confined to the larynx, it offers a fair chance of cure by excision of the larynx. That the intrinsic form of carcinoma, if it remain intra-laryngeal, admits of removal ; but that for the extrinsic form, as it cannot be completely eradicated, no operation further than a palliative tracheotomy should on any account be attempted.

In conclusion, we can strongly recommend the book, not only to those engaged in the speciality of laryngology, but to all who are interested in the working out of the life history of the malignant growths of which it treats. W. J. WALSHAM.

ARTICLE 2283.

Bacteria. By Dr. A. MAGNIN and Dr. G. M. STERNBERG, U.S.A. Second Edition, p. 494. Illustrated, heliotypes and figures. New York : Wood & Co.

THE constant search for, and study of the bacteria that accompany various diseases mark an increasing and widely spread interest in this intricate subject ; hence the appearance of a second, and very enlarged edition of Dr. Magnin's 'Bacteria,' translated by and enhanced through the conscientious labours of Dr. Sternberg, and also embellished by various heliotypes from his photomicrographs. Dr. Sternberg has increased the value of the book not only by his own work, but by a short summary of much that has already been done by others, and by an extended bibliography of the subject brought down to the present date.

In reference to yellow fever, he states his views from investigations he made at Havana, as regards the germ-theory of the disease ; but he does not consider it proved 'that the yellow fever germ multiplies within the bodies of those sick of the disease.' He alludes to the experiments of Dr. Freire with his micrococcus of yellow fever, cryptococcus xanthogenicus ; but it appears the book was in the press before their completion had culminated in the inoculation, as has been stated, of five individuals with the cultivated germs, or modified virus.

Dr. Sternberg is very cautious in accepting the conclusions drawn from experiments by various authors, and candidly notes the points that seem open to question. The particulars of the fatal experiments made on rabbits, by injecting his own and other's saliva, being that of healthy persons, are given in full, also the negative results of the inoculation of the cultivated micrococcus of gonorrhœal pus. The methods employed for obtaining pure cultures are stated, and differ somewhat from those adopted by other experimenters, but were found satisfactory. He has largely examined the question of germicides and antiseptics, but he has not carried the inquiry quite to the same delicate stage as has been done by Dr. Miquel at the Observatory of Montsouris, Paris (see *La Semaine Médicale*, Aug. 30, 1883); the place of honour in the long list of substances, capable of hindering the putrescence of a litre of beef-broth, being given to the biniodide of mercury, in the proportion of 0·025 gramme. A very interesting question was pointed out by Dr. Miquel in the *Annuaire de l'Observatoire de Montsouris*, 1882, which has hitherto been largely disregarded by experimenters—namely, the rejuvenescing power, in regard to atmospheric bacteria, of various sterilised media over others in use; also the difference obtained by dilution; the sensibility to the same volume of air drawn at the same time and place into the media differing immensely; starting with the sterilised liquor of Cohn, with an alterability of 0·05, and ending with the sterilised expressed juice of veal, with an alterability of 13·30. Some furnish higher ratios for micrococci, others for bacilli, and others for bacteria; for instance, the juice of veal for micrococci figures at 866, and neutral broth at 73; for bacilli at 38, and at 13; for bacteria at 370 and at 6. Thus, juice of veal, sterilised cold, stands at twelve times higher power for micrococcus, three times for bacilli, and sixty times for bacteria than neutral broth. Doubtless, in relation to this very interesting point, some of the previous work will have to be repeated or remain inconclusive.

The classification adopted is the provisional one of Cohn, and for some time any satisfactory classification must remain incomplete, seeing how very little is known of the life history of the different species of bacteria, and certainly before Zopf's views can be established of the genetic connection of the various forms already known as the developmental stage of the same organism. In such a study the necessity for pure cultures cannot be too strongly insisted on. A few of the figures in the book are reproduced, and acknowledged from the journals of this country. The heliotypes are valuable additions, though found to add greatly to the original cost of the publication. The conscientious manner in which Dr. Sternberg has completed his task adds largely to the value of this instructive and interesting work, which will doubtless contribute to a more comprehensive knowledge and extended study of the bacteria.

R. L. Maddox, M.D.

Article 2284.

Legal Medicine. By C. Mevmott Tidy, M.B. (Part II.). London: Smith, Elder, & Co. 1883.

This second instalment of Dr. Tidy's *magnum opus* treats of legitimacy and paternity, pregnancy, abortion, rape, indecent exposure, unnatural offences, live-birth, infanticide, asphyxia, drowning, hanging, strangulation, and suffocation; and it is stated by the author to contain the notes prepared for his lectures on legal medicine, delivered in 1882. About 800 illustrated cases are adduced, selected out of thrice that number consulted by the author. This fact alone may serve to show how valuable the work is, and the magnitude of the labour involved in its preparation.

Admirable as is the general execution of the work, we nevertheless think that the volume before us has two defects, the one of method, the other of execution. To divorce, as the author has done, the cases from the text, and put them as appendices, is alike objectionable and irritating. The reader has to continually turn to the end of the chapter which he is reading to consult cases. This method is as unreasonable as were an author of a work on chemistry to make the description of experiments an appendix to his treatise on the general principles of the science.

The other defect, to our mind, is the undue importance which Dr. Tidy appears to assign to exceptional and, we may add, mythical cases. For him, the marvellous and the paradoxical appear to have peculiar charms, and he dwells upon cases of this character sometimes at such a length as to exclude less questionable matter.

We have no wish, however, to decry the merits of a book of great merit, and one which will undoubtedly form a standard work of reference in the library of every medical jurist.

Thos. Stevenson, M.D.

Article 2285.

Verhandlungen der Berliner Medicinischen Gesellschaft, Band xiv. (Transactions of the Berlin Medical Society, 1882-83.) Reprinted from the *Berliner Klinische Wochenschrift*. Berlin: 1884.

Most of the more important articles in this volume have already been brought under the notice of our readers in the abstracts of the past year. A glance down the table of contents, however, serves to remind us of a goodly array of names of distinguished cultivators of medical science. Deprecating invidious distinction, we may refer to those of Virchow, Fränkel, Israel, Hirschberg, Liebreich, Küster, Westphal, Senator. The papers are given *in extenso* in the second part of the volume. Among these we may mention the following: the diagnosis of tubercular ulceration of the larynx, determined by the discovery of bacilli, by Herr Fränkel; a case of bilateral ocular disease associated with interstitial encephalitis, by Dr. Jacusiel; on the advantages of Sayre's plaster corsets, by Herr Sonnenburg; on deafness after mumps, by Dr. Seligsohn; Herr Küster's case of tumour of the mediastinum; Virchow on catarrhal ulceration; cases of Thomsen's disease, by Dr. Westphal; lesions of the brain in progressive paralysis of drunkards, by Dr. Mendel; syphilitic stricture of the pharynx and œsophagus, by Herr W. Lublinski; spasms of the hypoglossal nerve, by Dr. Remak; on congenital encephalitis in still-births and sudden deaths of newly born infants, by Dr. Virchow. The discussions which took place on these papers are very fully reported in the first part. As the whole covers upwards of five hundred closely printed pages, these Transactions may be regarded as containing a fair representation of the state of medicine in Germany.

W. B. Kesteven, M.D.

ARTICLE 2286.

Dr. P. Börner's Reichs-Medicinal-Kalender für Deutschland auf das Jahr 1884. Berlin: 1883. (Dr. P. Börner's *Medical Calendar for the German Empire.*)

THIS work is published in two separate parts, each of which is complete in itself. The first part consists of a small volume, which can be carried easily in the coat-pocket. It contains a diary, a very complete posological table, a list of the mineral waters, baths, asylums, &c., and several papers by well-known authors on some important subjects. The chapters on temperature and on urine by Jürgensen, on the detection of bacilli in sputum (now added for the first time) by Gaffky, and on disinfection by Wernich, are very good. Dr. Flügge's directions for the examination of air, water, and soil, are clear and practical. The usefulness of the book might be increased by the addition of short notes on the management of obstetrical cases, and on the performance of the most important operations of emergency. The second part is an useful book of reference for the library table. It contains, besides a complete Medical Directory of the German Empire, information on the laws affecting the medical profession in regard to fees, the notification of infectious diseases, &c.; lists of the professors and teachers in the Universities; and other matters. Two copious indexes, one of names of places and the other of names of persons, complete the book.

J. S. KAESER, M.D.

ARTICLE 2287.

The General Practitioner's Guide to Diseases of the Eye, &c. By LOUIS H. TOSSWILL, M.B. London: J. & A. Churchill. 1884.

THIS is, on the whole, an useful little work. Its teaching is fairly accurate, though naturally, from its size and object, very limited. But there are places in which the author might with decided advantage have said more. For example, under the head of interstitial keratitis, he fails to mention the characters of either teeth or physiognomy. Perhaps he omits them because he considers the diagnosis easy. In this, however, we cannot fully agree with him, since a very appreciable percentage of cases will tax all the diagnostic powers of the surgeon. The results of his treatment of the corneal opacities left by this condition appear to be favourable beyond those of others. Some indications, as the use of nitrate of silver and sulphate of copper for granular lids, might advantageously be given, and also some reference to salicylate of sodium in iritis. It is a great and important question whether he does not lean far too strongly towards excision as a preventative of sympathetic disease. The book is clearly and concisely written, and will, especially when these minor faults are corrected in a subsequent edition, be of great service to those general practitioners who have somewhat neglected their opportunities during their hospital career.

W. A. BRAILEY, M.D.

ARTICLE 2288.

Elements of Practical Medicine. By ALFRED H. CARTER, M.D. Lond. Second Edition. London: H. K. Lewis. 1883.

DR. CARTER'S little book is a favourite one with students, and has now reached its second edition. New sections on 'The Relation of Micro-organisms to Disease,' 'Pyæmia,' 'Septicæmia,' 'Tuberculosis,' &c., have been introduced. The whole has been thoroughly revised, much re-written, and an index added. Twenty-nine pages at the end of the book are occupied by the Therapeutic Index, which forms a good collection of prescriptions and formulæ, which young prescribers will find useful. As a 'simple introduction' to the study of medicine, it admirably fulfils its author's aim. Though necessarily condensed, the style is clear, intelligible, and eminently readable, and nothing essential seems omitted. While the non-reading student will welcome this little book as quite enough for 'the College,' the hard-worked practitioner will often be glad to consult its pages.

G. D'ARCY ADAMS, M.D.

ARTICLE 2289.

The Weather of 1883 *as Observed in the Neighbourhood of London Compared in all Respects with that of an Average Year.* By EDWARD MAWLEY, Member of Council of the Royal Meteorological Society. London: Stanford. 1884.

THIS is the fifth annual issue of a carefully compiled review of the weather in the neighbourhood of London. Three-fourths of the volume consist of a series of tables for each month, with accompanying comments and explanations; the statistics are summarised to show the mean and total results for each season, and finally for the whole year. A paragraph in the 'Concluding Remarks' might almost have been written for this year, 1884. 'Up to the end of February the weather maintained an almost unvarying mildness;' and there is a Cassandra-like sound in the next sentences which tells us that 'the prevailing high temperature of the winter months' of 1882–83, 'their stormy character, and constantly recurring rains, place the whole season in almost direct opposition to the spring which succeeded it. This was a very cold quarter, and commenced with the severest March for nearly forty years.' May the March of 1883 long maintain that proud pre-eminence! Looking at the year 1883 as a whole, it would appear to have been also remarkable for its winds, its small rainfall and small number of wet days, the comparatively slight range of its temperature, and a remarkably low death-rate.

NOTES ON BOOKS.

ARTICLE 2290.

The Roller Bandage. By WILLIAM BARTON HOPKINS, M.D. Philadelphia: J. B. Lippincott & Co. 1883.—The aim of the author of this work is to teach the method of applying the roller-bandage by numerous illustrations rather than by elaborate description. It may be doubted, however, with regard to both student and practitioner, whether one of these plans is likely to be less unsatisfactory than the other. The author, however, has certainly taken great pains in the preparation of his book, and starts with an useful series of definitions and general rules. Short descriptions are given of several forms of bandage that can be applied to the head, trunk, and extremities, and a drawing of each form is given. Some of the bandages are ingenious and not generally known to surgeons in this country, but in almost every instance some adaptation of Esmarch's handkerchief-bandage would no doubt be found equally serviceable and less complicated.

Article 2291.

International Review of Medical and Surgical Technics. (Official organ of the American Association of the Red Cross.) Vol. i., No. 1. Pp. 130.—Edited by Joseph H. Warren, M.D., Charles Everett Warren, M.D., Edward Everett Smith, M.D. Boston: International Medical Exchange. This is the first number of a review which, it is intended, is to be issued quarterly, and 'to be devoted chiefly to the description, illustration, and discussion of instruments, appliances, and methods of operation, that have been recently devised or published.' Descriptions of new devices and methods for preparing and administering drugs will, it is announced, be also noticed. This review, the starting of which has probably been suggested by the well-known and useful *Illustrirte Monatschrift der ärztlichen Polytechnik*, published at Berne, will no doubt meet a great want, as no other work with a like object is at present issued on either side of the Atlantic. If future numbers should rival this now under our notice, this review will certainly deserve the support of the profession. It contains besides many useful and well-illustrated articles on medical and surgical technics, an excellent section on 'Shifts and Expedients' in cases of emergency, and a description of the objects and organisation of the American Association of the Red Cross. The term 'international' in the title of this review, however, seems at present to have rather a restricted sense, since very few notices are given of recent German and French inventions, and these mostly at second-hand.

W. Johnson Smith.

NEW INVENTIONS.

Article 2292.

THE 'MALTINE' OF THE MALTINE MANUFACTURING COMPANY.

The success that has attended the introduction of extract of malt as a nutritive, both for children and for invalids, has resulted in a large increase in the number of firms preparing this very useful dietetic. Our attention has recently been called by the Maltine Manufacturing Company, of Hart Street, Bloomsbury, to the great improvements made by them in their well-known 'Maltine,' the original, and it is stated the only preparation composed exclusively of the three cereals, wheat, oats, and barley, of which it is a concentrated extract. Though it has always been a good dietetic and one to be relied on, the company have not been content to rest upon its original reputation, but have striven to improve it year by year. The managing director of the company has gone very systematically to work. As improvements were made, they were placed in the hands of Professor Attfield for analysis and trial, and that gentleman in his last report says that he has made periodical analyses. The services of Dr. Stevenson Macadam had been secured in Scotland, and those of Professor Chas. R. C. Tichborne in Ireland. The company likewise availed themselves of the chemical skill of continental experts; and the verdicts of Dr. Stutzer, Director of the Imperial Agricultural Chemical Laboratory for Rhenish Prussia; Professor J. B. Depaire, University of Brussels; Dr. J. W. Gunning, Professor and Analyst to the Dutch Government; Dr C. Méhu, Academy of Medicine, Paris; and, in America and Canada, of Dr. R. Ogden Doremus, of New York, and Professor Albert B. Prescott, University of Michigan, testify to the value of this Maltine. Dr. Von Moser, of Vienna, has just added his expression of approval to the others mentioned. The testimony of so many experts (than whom it would have been difficult to have selected names on which greater reliance could be placed) is so decided as to the value of Maltine, that its pre-eminence cannot be questioned. Professor Attfield wrote, in October, 1878: 'It contained unimpaired and in a highly concentrated form the whole of the valuable soluble materials which it was possible to extract from either malted wheat, oats, or barley.' In March 1881 he wrote 'that no better preparation of malt had up to that time been manufactured, either as regarded strength in the nutritive substances termed albuminoids, the bone-forming materials known as phosphates, or that which gives malt extract its chief value or digestion-compelling power—namely, diastase.' And in October, 1883, he adds: 'I find that its makers have succeeded in so increasing its strength in diastase, that it contains from three to five times as much of that substance as any extract of malt in the market. It digests five times its weight of starch in ten minutes, ten times its weight in twenty-five minutes, and thirty times its weight in three to four hours. Three and-a-half parts of phosphates, and fifty-six of albuminoids, are present in one thousand parts of Maltine. Its flavour and odour are those of a delicious sweetmeat.' Professor Tichborne says: 'I find Maltine is the richest in two of the most important ingredients in these foods—viz., the phosphates or bone-formers, and that peculiar digestive called diastase . . . . one part of diastase liquefied twenty parts of starch in two minutes. . . . Some Extracts of Malt do not seem to possess this property at all.' Dr. Stevenson Macadam says: 'I have contrasted it with the analyses made with four other well-known Extracts of Malt, and find that it is unusually rich in diastase, as well as in nutritive or flesh-forming, and in phosphatic or bone-producing ingredients. . . . Maltine materially exceeds in power and efficacy any of the other Extracts of Malt I have analysed. . . . Maltine not only deserves the highest place among such preparations, but will prove itself to be an able and successful factor in the assimilation of food.' Dr. Stutzer's opinion is: 'The nitrogenous substances it contains are considerably richer than in any Extract of Malt known in the market.' In four examples of Malt-Extracts of different makers analysed by Professor Prescott, he found that Maltine forms 131·6 per cent. of maltose, while the other samples showed figures far below it. One, a well-known preparation sold in England, only produced 0·6 per cent., all these samples being bought in the open market. These quotations are conclusive as to the merits of the Maltine prepared by the Maltine Company.

Since the above was written, we learn by telegram that a First Class Certificate and Gold Medal has been awarded to Maltine and to Carnrick's Beef Peptonoids (another preparation of the company) at the Calcutta Exhibition.

Article 2293.

RICHARDSON ON THE BEAD-INHALER.

Dr. B. W. Richardson, in the *Asclepiad* for January 1884, describes a new inhaler to be used in the administration of ammoniated chloroform for the reduc-

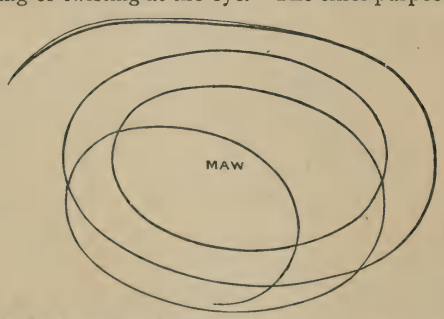
tion of zymotic pyrexia, as described in an essay in the *Lancet*, June 9, 1883. The advantages possessed by it are—1, smallness and easy portability; 2. steadiness for standing on the table at the bedside; 3, readiness for receiving the volatile fluid and retaining it when not in use; 4, possession of a wide surface for evaporation; 5, easy adaptability to the mouth of the patient by the patient himself while in bed and in any position; 6, cleanliness of action, so that different vapours may be used at different times without much trouble. A woodcut of the inhaler is given. The name is derived from the fact that in the receiving bottle there is placed a string of glass beads, held on a line of cotton-wick or silk. The beads fill the receiver, and form a free surface for the volatile fluid, without danger of the escape of the fluid except in the form of vapour during the inhalation.

ARTICLE 2294.

NEW SURGICAL NEEDLE AND THREAD.

THIS invention, which was exhibited in the Surgical Section at the meeting of the British Medical Association in Liverpool, August 1883, by Dr. John Ward Cousins, surgeon to the Royal Portsmouth Hospital, is a very simple innovation, in which the ordinary steel needle is superseded by converting the end of the wire into a needle. The wire is cut into equal lengths, and each piece is separately reduced by drawing, with the exception of an inch or two at one extremity. The end is then converted into a convenient needle by pointing and burnishing.

This little invention offers several advantages in many surgical applications. The needle is always new and clean, and it can be used only for a limited number of sutures. It requires no preparation or threading; and the continuity of the needle and the ligature prevents the delay in introduction, which often occurs with the ordinary needle from kinking or twisting at the eye. The chief purpose of



this little invention is to prevent unnecessary pain, and to provide a needle with a perfect point, which can be used only in the introduction of eight or ten sutures and then thrown away for ever. It is, moreover, especially adapted for the immediate surgery of the field of battle.

In the hands of Dr. Cousins, nickeled steel wire has proved an excellent metallic thread for closing skin-wounds, and, in consequence of its peculiar rigidity, it requires only the turn of the ligature to secure the edges in perfect apposition. It can also be very easily removed; and this is a great advantage, for the 'taking out' of the thread is often a more painful operation than its introduction. The single turn of the wire should be made on one side of the wound, over the point of penetration, and the ends evenly bent down. For the painless removal of the suture the loop should be first unfastened, then, while holding with the left hand one end of the wire, the other end should be straightened out and cut short; the thread now can be easily withdrawn.

The surgical needle and thread is manufactured by Messrs. Maw, Son, & Thompson, in several convenient sizes, from nickeled steel and silver wire. The steel needles are made both straight and curved; the silver needles are tipped with steel and flexible, so that they can be bent to any shape, and are thus especially adapted for many plastic operations. To protect the point from accidental injury, each needle is supplied with a shield of fine straw.

MISCELLANY.

LANJORROIS ON THE ANTISEPTIC PROPERTIES OF BICHROMATE OF POTASH.—Some experiments mentioned by the *France Médicale* (Jan. 4, 1884) show that urine, blood, milk, and other substances can be preserved from putrefaction during several months by the addition of 1 per cent. of their weight of this salt.

TREATMENT OF CORYZA.—Dr. Gentilhomme has employed atropine as a means of cutting short an ordinary acute coryza, when employed sufficiently early, at the very beginning of the inflammation. He administers it in pills, in a dose of half a milligramme.

HEREDITY IN NERVOUS DISEASES.—Dr. Möbius, of Leipzig, has investigated the genealogies of five families through several generations, in order to obtain some information with regard to the mode of heredity in nervous diseases (*Deutsche Med. Wochensch.*, Nov. 7). He finds, among other things, that drunkenness exerts a most powerful influence on posterity, and that even the apparently healthy members of a nervous family are not normally vigorous and capable of enjoying life. He is of opinion that no one who has once suffered from a severe form of nervous degeneration ought ever to marry.

NEW METHOD OF TOOTH-DRAWING.—In the *Brit. Med. Jour.*, Dec. 1883, p. 1142, attention is drawn to a new method of tooth-drawing practised by a dentist of Geneva. A small square of India-rubber, pierced with a central hole, is pushed over the tooth till the upper part of the root is reached. The India-rubber gradually contracts, pulls on the root, and the offending tooth is finally enucleated without causing the patient any pain whatever.

MR. CHRISTOPHER HEATH has undertaken to edit for Messrs. Smith, Elder, & Co. a 'Dictionary of Practical Surgery,' on the lines of Quain's 'Dictionary of Medicine,' and in his important work he will have the co-operation of the most eminent surgeons of the day, each of whom will sign the articles he contributes. The dictionary, which is intended to be a compendium of the practice of surgery of the present year, will be complete in two octavo volumes of about one thousand pages each.

ATTENUATION OF VIRUS BY RAPID HEATING.—This method (*Gaz. Méd. de Paris*, 1883, No. 50), which has been introduced by Pasteur, consists in dividing the vaccine fluid into two parts; one is heated to 80° C. (176° F.) and used for the first inoculation, while the other is left as it is, and used later on for the second inoculation. In order to test this method, ten sheep were inoculated with the heated fluid; none of them died, and two months later the second inoculation was performed. One of the animals then died of splenic fever. After an interval of three weeks, the nine remaining were repeatedly inoculated with very active virus and blood, but none of them died. According to Chauveau, this method is easy of execution, does not expose the animals to great danger, and confers complete immunity.

The London Medical Record.

Article 2295.

BANTI ON SPLENIC ANÆMIA.

Dr. Guido Banti (*Archiv. della Scuola di Anatomia Patologica di Firenze*, and *Annali Univ. di Med.*, November 1883), begins by giving a short historical sketch of this disease, which is often confounded with leukæmia. There are three kinds of leukæmia, the splenic, the lymphatic, and the myelogenic. From lymphatic leukæmia has been gradually distinguished another disease, having in common with it an increase in volume of the lymphatic ganglia, but with this distinction, that in it the characteristic leukæmic change of the blood is wanting. This disease is known under the name of lymphatic anæmia, or Hodgkin's disease (Wilks), pseudo-leukæmia (Wunderlich); or adenia (Trousseau). Other rare cases are known in which the leukæmic alteration of the blood is wanting, and also the enlargement of the lymphatic glands, but there is instead enlargement of the spleen. This is splenic pseudo-leukæmia, called by Griesinger splenic anæmia or cachexia. Splenic anæmia is characterised by progressive oligæmia, arising without appreciable cause, giving rise to grave disturbances of all the organic functions, œdema, hæmorrhages, irregular fever, almost invariably followed by death, accompanied by marked tumefaction of the spleen and often of the liver, independent of any preceding morbid state, and with no leukæmic change of the blood. Shortly, splenic anæmia is an idiopathic anæmia, accompanied by hypertrophy, also idiopathic, of the spleen, and often of the liver, without leukæmia.

The author gives the history of three cases which came under his own observation—the first of a woman aged 72, the second of a lad aged 18, and the third of a girl aged 16, the last being the most interesting, as the disease was complicated with hepatic cirrhosis. The disease stands in no relation with the best known causes of common anæmia: it is not caused by either scrofula, rickets, syphilis, or alcoholism. In one patient, the symptoms commenced after bathing in cold water while sweating; in no case was there a history of injury in the left hypochondriac region. The author also rejects the hypothesis of a specific organised agent. Climate, sex, and age, seem to exert no influence. On *post mortem* examination, anæmia and dropsy of the skin and serous membranes are found. The nervous, respiratory, and digestive systems are unaltered. The liver is generally large, reddish-brown or yellow, and under the microscope shows a circumlobular interstitial hepatitis commencing in the portal branches of the triangular spaces and thence extending to the interlobular fissures, while the hepatic cells are either unaffected, or atrophic in a state of granular degeneration, and deficient in pigment. The spleen is always enlarged, and may even fill in great part the abdominal cavity, and may weigh as much as 2 or even 3 kilogrammes (4 to 6 lbs.). Its form is generally preserved; the indentations which always exist on its internal margin appear more marked and deeper, and in consistence it is more or less increased; its colour is reddish-brown. The capsule in points may be seen thickened and opaque; more rarely adhesions are found to other organs. The surface on section is of a uniform reddish-brown, on which in some cases whitish hard patches, of the size of a nut, are seen. The histological alterations are atrophy and sclerosis of the Malpighian bodies, disappearance of the normal adenoid tissue and its substitution by a network, with irregular narrow meshes with large, long, ribbon-shaped fibrillary filaments. The author points out that the alterations of the spleen differ much from those found in splenic leukæmia, while they approach those described in the lymphatic glands in malignant lymphoma. For the sake of brevity and clearness, he proposes to call the lesions of the spleen and glands in leukæmia by a different name from those of pseudo-leukæmia, taking as a base the state of the lymphoid reticulum. And, as in leukæmia there is increase of adenoid tissue without substantial modification of structure, he proposes to call this state *hyperadenia*; in pseudo-leukæmia, there is more or less enlargement of the filaments of the reticulum, as if from their fibrous transformation, and he proposes to call this state *fibro-adenia*.

The disease commences insidiously, and advances without the knowledge of the patient. The author distinguishes three stages. The first consists in enlargement of the spleen, and is unobserved by the sufferer. The second begins with the manifestation of symptoms of anæmia, and is prolonged to the third stage of cachexia, which terminates in death. The enlargement of the spleen, at first unobserved, afterwards gives rise to a sense of weight and dragging in the erect position, and may become actual pain and give rise to most troublesome neuralgia. The phenomena of the anæmia are those observed in ordinary forms of anæmia. The patient is easily tired, the skin and mucous membranes become pale, the breath short, the cardiac impulse strong and frequent; there is then œdema of the lower limbs. These symptoms give rise to marked cachexia, the skin dirty white, like old wax; the fat disappears or is sometimes retained, and the dropsy of the skin and cavities becomes more pronounced. Finally, two conspicuous symptoms appear, hæmorrhage and fever, which are not easy of interpretation. The secondary symptoms are, increase in size of the liver, generally depending on interstitial hepatitis, then dyspnœa, dyspepsia, diarrhœa, mental depression, &c. The red blood-corpuscles are more or less diminished. From 5 millions in a cubic millimètre they descend to 4, 3, or even 1 million. Some of these corpuscles have a diameter of 8 micro-millimètres; few surpass this; many vary between 6 and 7, and many are seen smaller than 3 or 5 micro-millimètres. Those surpassing 6 micro-millimètres are misshapen and oval. In some cases the white corpuscles are not above normal, in others they are more numerous, but never as in leukæmia (1 white to 20 to 50 red). Their average diameter is 7 or 8 micro-millimètres, few reach 9 or 10. Their protoplasm is granular, and becomes transparent with acetic acid, showing a nucleus generally single; they do not contain pigment-granules. Nucleated red corpuscles were never observed, and the quantity of hæmoglobin was always diminished, though not to any great degree. In the urine, uric acid and urea were increased; no albumen or sugar.

Banti maintains that the increase in volume of the

spleen is the primary fact in the causation, since it precedes the signs of anæmia, and also because recovery has taken place after extirpation of the hypertrophied spleen. The altered spleen either destroys in great quantity the red corpuscles, or in the bio-chemical processes of the diseased spleen incongruous and irritating materials are formed, which, after entering the circulation, alter secondarily the functions of the chyle and blood-making organs. Of these two hypotheses, the author prefers the latter. Of the causes of the primary enlargement of the spleen, Banti has no hypothesis to advance. As to the nature of the disease, he holds that splenic anæmia is only the *pure splenic form of pseudo-leukæmia*. In pseudo-leukæmia, the lymphatic glands are rarely affected alone; more often the spleen is involved at the same time. In some cases, while the spleen has reached a large size, the glands are not enlarged in equal proportion. There is then a continuous chain of facts observed, which commences in those cases in which the spleen alone is affected, passes to those in which few glands are altered, to finish in those in which the spleen and glands are affected equally. The microscopic changes of the spleen are similar to those of the glands in pseudo-leukæmia. The course of the disease is rapid, that is, from five or six months to about three years; the first stage is perhaps the longest and the third the shortest. Progress is continuous, and death follows, except in those cases saved by surgical treatment. The author gives a table of all the cases of splenotomy performed for non-traumatic lesions. These cases are twenty-one in number, among which are four well-ascertained cases of splenic anæmia. Of these four, three recovered. Banti therefore recommends extirpation of the spleen as the most rational and hopeful treatment. G. D'ARCY ADAMS, M.D.

ARTICLE 2296.

HEUCK ON EXTIRPATION OF CANCER OF THE RECTUM.

IN a paper on the 'Statistics and Operative Treatment of Cancer of the Rectum' (*Archiv für Klinische Chirurgie*, Band xxix., Heft 3), Dr. G. Heuck, of Heidelberg, gives reports of 43 cases of this affection treated during a period of six years by Professor Czerny. In 2 only of these cases were the patients under the age of 30 years, and in 29 cases the disease commenced between the ages of 40 and 60 years. Of the 43 patients, 30 were males and 13 females. In his remarks on the structure and extent of the cancerous growths in these cases, the author points out as a fact of importance with regard to practice that cancer of the rectum, like cancer of the stomach, presents itself in one or other of two very distinct forms. In one, the new growth commences in the superficial layers of the mucous membrane, ulcerates early, and does not until a late period involve the whole thickness of the wall of the rectum. In the second, and less frequent form, the carcinomatous deposit extends below the inner surface of the rectum, and the mucous membrane remains intact for a long time. This latter form of the disease is much more diffused than the first mentioned and usually sharply defined form, and in most instances causes extreme stenosis.

In one only of the 43 cases recorded in this paper was there secondary cancerous disease of the inguinal lymphatic glands; and in this case the cancer had extended beyond the rectum and involved the skin of the perinæum. The author points out that the lymphatics of the rectum pass to glands situated within the pelvis; and he disagrees with the statement of Winiwarter that when, in cases of cancer of rectum, the inguinal glands are in a normal condition, the pelvic glands likewise remain unaffected.

In 25 of these cases a radical operation was performed, and the diseased portion of rectum excised. The operation itself was the cause of death in one only of these cases, although the peritoneal cavity was opened in eleven patients. Of 9 patients who, up to the time of the publication of this paper, remained free from relapse, 2 had survived the operation for longer than four years, 1 was alive after an interval of three years and nine months, 3 after intervals of at least two years, 1 at the end of twelve months, and 2 at the end of six months. In those cases where the patients were alive three years or more after the date of the operation, the cure, the author holds, may be considered as permanent. According to Volkmann, however, freedom from relapse for even four years is not sufficient to ensure for the patient a permanent cure; and a few cases have been reported by this surgeon of return of cancer in the rectum after intervals of five and six years from the performance of extirpation. In most of Czerny's cases in which there has been no relapse, the cancerous disease had lasted for some time before the operation; in 1 case for four years, in 3 cases for three years, and in 3 other cases for two years. Relapse occurred in 15 of the 25 cases, 60 per cent. In every one of these cases the disease returned within twelve months after the operation. The average duration of the disease from its re-appearance to the death of the patient in the 15 cases was 11·7 months.

The operative proceeding for the removal of cancer of the rectum must vary in different cases according to the seat and extent of the new growth. Dr. Heuck mentions three operations, the first of which has most frequently to be performed; extirpation of a more or less considerable portion of the lower part of the rectum over the whole of its circumference, the margin of the anus being removed, or a narrow strip of mucous membrane being left just above the anus; removal of an isolated tumour or small cancerous ulcer; circular resection of the rectum in its upper part and apposition of the two divided portions of intestine by circular suture. Dr. Heuck is opposed, on account of the increased risk of relapse, to the practice of leaving a strip of mucous membrane below the wound, even if this membrane be apparently quite sound. The edge of the divided gut should always, if it be possible, be fixed by sutures to the edge of divided skin, in order to prevent fæcal matter from coming into contact with the surface of the wound, and also to guard against subsequent stenosis. In 6 of the 11 cases in which the peritoneal cavity was opened, the rent in the peritoneum was at once closed by sutures, whilst in the remaining cases this rent was left open. Wounding of the peritoneum, it is stated, is not really attended with much danger, if care be taken, by stitching the remaining portion of the gut to the external skin, to prevent fæcal matter from coming into contact with the raw surface of the wound.

The only contra-indications to extirpation of cancerous disease of the rectum are stated by Dr. Heuck to be adhesion of the tumour to parts

surrounding the rectum, extreme debility of the patient, and the presence of secondary growths in internal organs.

In some editorial remarks on Dr. Heuck's paper in the American *Medical News* for Oct. 13, 1883, it is stated that to the 25 cases in which extirpation had been performed by Czerny there may be added 198 other cases which have been put on record. 'Of the entire number—223,' it is stated, '180 recovered, and 43, or 19·3 per cent., died. Of 142 in which the final result is known, 64 remained well for periods varying from two months to ten years, and 78, or 54·9 per cent., recovered. The cases being omitted in which the recovery at the date of the last report had lasted only from two to sixteen months, there are 35 cases in which had been no return of the disease for two years and upwards, 13, indeed, having remained well for between five and ten years, so that 15·7 per cent. of the entire 223 were in all probability permanent cures.' If three years and upwards be regarded as still better representing a probable immunity from recurrence, the 28 cases which come under this category show 12·5 per cent. of cures, while the 21 cases which represent four years and upwards make the number of cures 9·4 per cent. W. Johnson Smith.

Article 2297.

POPOFF ON THE ACTION OF PARALDEHYDE.

In the *Meditz. Obozrenie*, Fasc. 1, Vol. xxi., 1884, p. 69, Dr. S. A. Popoff, of St. Petersburg, details his experiments on the action of paraldehyde in frogs, rabbits, and dogs, and arrives at the following results. 1. Paraldehyde produces a marked diminution (and, when used in toxic doses, subsequent loss) of sensibility, of reflex action, and of voluntary movements. 2. The change in sensibility and reflex excitability depends on the action of the drug both on the reflex centres in the spinal cord, and on the peripheric sensory nerves. 3. Irritability of motor nerves and striated muscles remains unchanged. 4. Small doses at first produce a temporary increase of excitability of the cortex of the brain. Strong doses have a depressing action. 5. Even comparatively large quantities of the drug do not affect the action of the heart and the arterial tension. Toxic doses, however, bring about, first, a retardation, and afterwards an increase in the frequency of the heart's action, with a diminution in the strength of individual beats, and with a gradual fall of the blood-pressure. The heart finally stops in diastole. 6. Paraldehyde causes a more or less considerable retardation of respiration, which lasts during the whole hypnotic stage. When toxic doses are given, this retardation develops itself very rapidly, and gradually rises to a complete stoppage of breathing, the phenomena being of a central origin. 7. Like chloral, paraldehyde increases the secretion of urine, and, in large intravenous doses, causes hæmaturia (from its destructive action on the red blood-corpuscles). 8. Its antiseptic and antifermentative properties are strong. A piece of meat remains sweet in 2 per cent. solution of paraldehyde for four months; in 1 per cent. solution for a month; in ½ per cent. for a fortnight. A 0·5 per cent. solution of the drug completely inhibits alcoholic fermentation in a mixture consisting of 15 grammes of water, 0·2 gramme of sugar, and 0·1 of yeast. A 1½ per cent. solution absolutely arrests decomposition of urine. The author's observations on various patients brought him to the conclusion that the drug, in doses from 2 to 6 grammes, is a good hypnotic, giving from three to five hours' sleep in the daytime. It does not give rise to any unpleasant accessory symptoms. Very good results were obtained by Dr. Popoff from the local application (*per se*, on a piece of cotton-wool, or in solution) in cases of dental caries. The only drawbacks of the drug are its high price and the necessity of constantly increasing the hypnotic dose, since the patients grow accustomed to it very rapidly. [As is seen, Dr. Popoff's results agree in the main with those obtained by his predecessors. See Morselli and Bergesio's paper in the London Medical Record, Jan. 1883, p. 17; Morselli's, March, p. 85, and June, p. 239; Albertoni's and Cervello's, June, pp. 237 and 238; Brown's, July, p. 286; Pereth's, Dec., p. 508; Dana's, in the *New York Medical Record*, Aug. 25, 1883; and O. Berger's, in the *Bresl. Aerztl. Zeitschr.*, No. 6, 1883.—*Rep.*]

V. Idelson, M.D.

Article 2298.

EWALD ON THE SOUNDS ACCOMPANYING DEGLUTITION.

In the *Berl. Klin. Woch.*, 1883, No. 52, is an address by Dr. Ewald on the above subject, in which he began by referring to the researches of Kronecker and Meltzer. These observers have shown that the act of swallowing, instead of being a peristaltic action following upon contraction of the constrictors as commonly supposed, is in reality divided into two distinct phases, differing in their nature and course. There were several reasons against accepting the peristaltic theory, *e.g.* hot draughts are at once felt in the stomach on swallowing; again, in most cases of corrosive poisoning the œsophagus is only affected in patches; and lastly, partial paralysis of the œsophagus does not prevent the act of swallowing. Kronecker and Meltzer have proved, on the other hand (du Bois-Reymond's *Archiv*, Suppl. Festgabe, 1883), 1st, that the bolus is delivered direct from the mouth to the cardiac orifice (or the stomach) with extreme rapidity, viz., in about $\frac{1}{10}$th second; and 2nd, that a considerable time afterwards, usually six or seven seconds, a gradual peristaltic action commences from above downwards, and clears and closes the œsophagus.

The first (and sudden) act is not caused by the constrictors of the pharynx, but by the mylohyoidei and the hyoglossi. The tongue is raised against the hard palate and drawn backwards, and a space is thus shut off (from the mouth), with the relatively high pressure of about 20 cubic centimètres of water. From this space the bolus is thus shot—somewhat like a bullet from the powder chamber of a rifle—down the œsophagus. Should a second bolus follow before the following slow contraction, this latter is delayed accordingly. The above observers say, also, that there is a tonicity of the cardiac sphincter preventing the direct passage of the bolus into the stomach, which only occurs at the end of the succeeding slow peristaltic contraction. But there is still some uncertainty about this.

On auscultation during deglutition Meltzer describes two sounds, one immediately on swallowing, the 'primary murmur,' a loud gurgling sound; the other, five to twelve seconds later, the 'secondary

murmur,' of a different timbre. Ewald made between 400 and 500 observations, and, as a rule, heard both sounds distinctly; but occasionally one or both failed, and without apparent reason. Clinically, therefore, he considered that auscultation of these sounds was of no use. He also disagreed with the above observers on the production of the second sound, and thought it simply due to the contraction of the stomach.

Fränkel, however, agrees with Meltzer on this last point, and states also that in *secondary syphilis* the first sound became more distinct, while the second sound was absent. Moreover, the sounds have a pathological significance in *paralysis of the œsophagus*. This, as is well known, is characterised by the fact that fluids are much more easily swallowed than solids (in contrast to paralysis of the velum palati), while the passage of the sound is facilitated. Now in such cases the second sound was always very distinct; in two cases it was very loud; it was delayed, and was of longer duration. The cardiac sphincter is in antagonistic relation to the œsophageal muscle, being more contracted in paresis of the latter. The second sound was heard a yard distant in one case. On the other hand, in stricture there was no alteration of the sound. Thus in stricture the sounds are unaltered, the passage of the bougie being difficult, while in paralysis the second sound is delayed and intensified, the bougie being easily passed.

[The reporter had a case a few years ago bearing upon the above subject, and in favour of the view that in paresis of the œsophageal muscle the cardiac sphincter presents obstruction. A woman, about fifty years old, presented herself in great distress, saying that a piece of goose she had eaten shortly before 'would not go into her stomach.' She indicated a spot to the left of the sternum on a level with the fifth rib as the seat of the obstruction, and said she could feel something there most distinctly. The reporter considered she was only hysterical, and passed a sound. It encountered opposition about the spot mentioned—but on pressing it onwards the patient suddenly expressed herself as completely relieved, and the sound passed on at the same time just within the cardiac orifice. On withdrawal, fragments of food were found adhering to its lower end, and the reporter felt compelled after that to accept her version of the matter.—*Rep.*]

E. J. Edwardes, M.D.

Article 2299.

SCHEIBER ON ROTATORY EPILEPSY.

Dr. Scheiber, of Buda-Pest, communicates to the *Wiener Med. Blätter*, of Oct. 4, 11, and 18, an account of a remarkable case of what he calls epilepsia rotatoria in a married woman 46 years of age. The patient had always been quite healthy, and had never suffered in childhood from any nervous trouble, nor had any such been in her family. In 1861 and in 1870 respectively she had severe frights, in the one case from the discharge of a gun in the room where her children were, in the other from a report that one of her boys had fallen into the river; but both passed off without leaving any consequences, and she was a bright, lively woman, helping her husband in the school which he taught.

In 1871 she changed her residence, and three months afterwards, being in her ninth pregnancy, she felt a sudden attack of giddiness whilst cooking one morning. The feeling lasted only a few seconds, and was accompanied by a sensation as if her face had been turned rapidly towards the left. Some weeks afterwards the same feeling returned while she was engaged in washing; and after another few weeks, in the seventh month of pregnancy, such a strong attack of giddiness came on that her husband was obliged to hold her, and at the same time her whole body was turned rapidly and violently on its vertical axis three or four times towards the left. These attacks occurred once or twice every day, but were followed by no unpleasant symptoms, and at the end of the pregnancy they ceased altogether.

During the fifth month of the tenth pregnancy they came on again in the same way, to disappear after the birth of the child. In 1876, when she was six months pregnant of her eleventh child, she had a sudden and violent epileptic fit, beginning, as before, with giddiness and rotatory movements, and followed by convulsions and loss of consciousness, which lasted for three days, with epileptic seizures about every half-hour. Those severe attacks then occurred nearly every day, and did not cease, as before, with the termination of the pregnancy, but have continued more or less ever since, coming on also during the night.

The less severe attacks are always associated with the rotatory movements, which occur when the patient is standing or walking, without causing her to fall, and leave her standing quite still, without giddiness or staggering. If she be seated when they come on, she suddenly springs to her feet, and then the rotation begins, feeling, she says, as if someone seized her by the head and forcibly turned her round. If she be lying in bed, she is at once forced into a sitting posture, even out of the deepest sleep, after which she falls back on the bed and is rolled in the same direction, only prevented by her husband from rolling to the floor. The severer attacks, amounting to loss of consciousness, leave exhaustion and weariness, so that this exhaustion is often the only sign by which she knows that she has had an attack during the night.

In 1878 she took bromide of potassium and atropine, with the result of stopping the attacks, but she felt so ill and wretched the whole time that the treatment was stopped, as she preferred having the attacks and then feeling, as she always had done, perfectly well in the intervals. When the attacks came on after that treatment, it was with some considerable variation; the severer fits did not return, and the milder ones only at night, so that the patient gradually became able to move about by day, and even to take long walks. During the night, however, they became very frequent, six or seven in one night, and finally they were liable to come on even as soon as she closed her eyes, or if she lay down during the day. The severer attacks then began to come on during the night once a week, occurring generally between the hours of 3 A.M. and 6 A.M. She now became able to prevent the rotatory movements during the day, when the giddiness gave her sufficient warning, by several rapidly drawn respirations, which were always successful when the warning occurred soon enough. During two absences from her home in Alba, one of six weeks and the other of ten days, no attacks occurred, but they reappeared at once on her return home.

During the period of the severe attacks she has borne two more children, making thirteen in all; the

pregnancies and deliveries have been normal, and the children healthy and strong. Large doses of bromide of potassium have been given by Dr. Scheiber, but 6 grammes (90 grains) a day, which cut short the attacks, produced toxic effects, and had to be diminished. In June 1883 the severe attacks had entirely ceased, the milder ones had become still milder and less frequent, and in August, under the influence of a combination of bromides of potassium, sodium, and ammonium, of each 2 grammes (30 grains) daily, the day-time attacks ceased, the two or three during the night were quite inconsiderable, and the patient seemed as well and strong as ever, with only a little weakness of memory.

The author ascribes what is undoubtedly a form of epilepsy to a deposit of osteophytes on the interior of the skull during the successive pregnancies in which the attacks broke out; and the remarkable fact that the intellect should have remained intact after twelve years of epileptic attacks, is attributed by him to the epilepsy having been acquired at a late period of life.

Alice Ker, M.D.

Article 2300.

KÜSSNER, PONFICK, AND LITTEN, ON HÆMOGLOBINURIA.

The subject of paroxysmal hæmoglobinuria has attracted a good deal of attention, and all contributions tending to elucidate its pathology are regarded with interest. Küssner (*Berlin Klin. Wochensch.*, June 25, 1883) has confirmed Hayem's observation that the blood-serum during the attack contains hæmoglobin dissolved in it. He found the serum *ruby* red, and giving the characteristic bands of hæmoglobin with the spectroscope. Ponfick (*Berlin. Klin. Wochensch.*, 1883, p. 389) distinguishes three degrees of hæmoglobinuria; in the first it is latent, and not accompanied by hæmoglobinuria; in the second, hæmoglobinuria occurs, but only lasts a day or two; in the third, the hæmoglobinuria is fatal, death resulting from the blocking of the renal tubules. The last condition is based solely on laboratory experience, no example of it having been observed in human pathology.

Litten (*Bull. Berlin. Med. Gesellsch.*, Dec. 2, 1883) has found that there are certain substances which, when injected into the blood, cause the corpuscles to give up their hæmoglobin. Such substances are naphtol, pyrogallic acid (alizarin), and aniline; with the former two the corpuscles break up, but with the latter they merely shed their hæmoglobin, becoming pale colourless discs. An animal subjected to this experiment becomes thin and weak, but presents no dyspnœa, or other symptoms such as would be expected in so profound a lesion of the oxygen-bearing part of the blood. Hæmoglobin did not always pass into the urine, and, even when it did so, the symptom passed off rapidly, although the blood-serum still contained a large proportion. The spleen, liver, spinal cord, and kidneys may become impregnated with hæmoglobin, and in the last-named organs it forms cylinders which obliterate the tubules. Litten injected pure hæmoglobin into the circulation of an animal, to determine whether the passage of hæmoglobin through the kidneys could determine nephritis. He found that it caused albuminuria which lasted longer than hæmoglobinuria, but he does not believe it caused a true inflammatory affection of the kidney. Liebreich, in the discussion which followed Litten's paper, said that Litten had caused toxic nephritis by injecting aniline. Litten said that the nephritis was slight, the albumen small in amount, and all the animals recovered. He believed the irritation was due to the hæmoglobin, and not to the aniline.

Litten was not able to produce the transformation of hæmoglobin into hæmatoidin by ligature of the ureters. He did not observe any febrile paroxysms such as are seen in human subjects.

Robert Saundby, M.D.

Article 2301.

BRICON ON OSTEOMYELITIS.

The following summary of recent researches in the pathology of acute osteomyelitis is taken from an able article by M. Paul Bricon in *Le Progrès Médical*, No. 3, 1884.

The existence of a micro-organism in osteomyelitis has been for long a familiar doctrine in Germany, especially since the researches of Hallier, Klebs, von Recklinghausen, and others. One of the best works on the subject is that of Lücke, who reminds us that a micrococcus was found by Recklinghausen and Klebs; the former finding the organism in the muscles, heart, kidneys, &c. In a necropsy made by Klebs, death occurred without any surgical interference, so that the organisms could not have been introduced from without. Lücke attributes the disease to cold, especially damp cold, or to injury; a favourable soil thus being prepared in which develop organisms previously circulating with impunity in the blood. He gives twenty-four cases, of which two died of fat-embolism.

Senn's views are much the same as those of Lücke. Rosenbach thinks that the micrococcus is specific, and differs from that found in ordinary abscesses; Kocher thinks it is not. Rosenbach believes that it is not inoculable, and that the pure constitutional symptoms are due to the circulation in the blood of the products of inflammation and decomposition, and especially to fat-embolism. Kocher believes that injuries cannot produce osteomyelitis without local or general infection, either through the external wound, or, when this is not present, through the mucous surfaces; as before stated, he regards the poison as identical with the ordinary septic micrococcus. König believes in the specificity of the disease. Max Schüller found micrococci in all the tissues of the thigh of an infant, amputated three weeks after the commencement of the disease for acute osteomyelitis. The organisms were coloured well with gentian-violet, methyl-violet, rosaniline, Bismarck blue, and a mixture of ammoniacal carmine and carbolic acid. They may also be rendered evident by a drop of concentrated acid or of liquor potassæ. The micrococci were found in the marrow, the periosteum, and the soft parts, which were inflamed and infiltrated with pus, in the articular cartilages, &c. They formed chains, or diffused collections. Ziemacki refers to the presence of micrococci in osteomyelitis. Friedmann and Birch-Hirschfeld have also described it. Gussenbauer says, 'the course of the suppuration, the elevated temperature, and, finally, the discovery of organisms made by Klebs, Recklinghausen, and Eberth, leave no doubt upon the infectious nature of the malady.'

Becker has attempted to cultivate the micrococcus by Koch's methods, and has inoculated the culture fluids in rabbits, mice, &c., without any result; but the introduction of a large quantity into the peritoneal cavity caused violent peritonitis and death. His experiments were more successful when, previous to the injection, a subcutaneous fracture or contusion had been produced. He did not succeed in producing any results with ordinary pus. Becker proposes to continue these experiments to determine whether the pus of septicæmia or pyæmia, inoculated and cultivated, will cause osteomyelitis in an animal previously injured.

Bibliography of Osteomyelitis.

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2. KLEBS.—Beiträge zur Anat. der Schusswunden, p. 120.

3. SENN.—Spontaneous Osteomyelitis in the Long Bones. (*Chicago Med. Jour. and Examiner*, Vol. x., 1880, p. 10.)

4. ROSENBACH.—Beiträge zur Kenntniss der Osteomyelitis. (*Deutsche Zeitschr. für Chir.*, Band x., 1873, p. 369.)

5. KOCHER.—Die acute Osteomyelitis, mit besonderer Rücksicht auf ihre Ursachen. (*Deutsche Zeitschr. für Chir.*, Band xi., 1878, p. 87 and 218.)

6. MAX SCHÜLLER.—Zur Kenntniss der Mikrokokken bei akuter infektiöser Osteomyelitis, Mikrokokkenherde in Gelenkknorpel. (*Centralbl. für Chirurgie*, No. 42, 1881.)

7. ZIEMACKI.—Beitrag zur Kenntniss der Micrococcuscolonien in den Blutgefässen bei septischen Erkrankungen (*Zeitschr. für Heilkunde*, Band iv., Heft 2, 1883, p. 89.)

8. FRIEDMANN.—Fall von primärer infectiöser Osteomyelitis. (*Berliner Klin. Woch.*, Band xiii., Nos. 4, 5, and 6, 1876.)

9. GUSSENBAUER.—Septhämie, Pyohämie, und Pyo-septhämie. (*Deutsche Chirurgie*, Fasc. iv., 1882, p. 107.)

10. EBERTH.—(*Virchow's Archiv*, Band lxv., p. 341.)

11. BECKER.—(*Deutsche Med. Wochensch.*, No. 46, 1883.)

ARTICLE 2302.

HENOCH ON CHOREA.

HENOCH states (*Berlin. Klin. Wochensch.*, No. 52, 1883) that chorea is rarer in children than West represents. Besides the ordinary chorea of children (chorea minor), there is a form characterised by a very chronic course, with alternating improvement and relapse, and by the fact that the inco-ordination is not increased by volition, but rather is restrained. A third form, which the author calls 'chorea electrica,' is the disease Trousseau had in his mind when he spoke of 'tic non-douloureux.' The patient is affected with 'lightning' contractions of various muscular regions, often, but not necessarily, connected with facial 'tic,' and the disease has been called 'tic convulsif.' (Remak obtained a cure in one case by the constant current.) This form of chorea may be associated with the ordinary form. Of true chorea there are three kinds—the *symptomatic*, the *hysterical*, and the *chorea minor* peculiar to children. Chorea symptomatica depends upon alterations in the central nervous system, especially those caused by tuberculosis (whether meningeal or in the brain), and the posthemiplegic chorea of adults belongs to the same category. Chorea hysterica is described by Trousseau as occurring in hysterical girls and women; it apparently does not occur in children. Chorea minor is the form of chorea peculiar to children. Its duration is limited, and recovery always ensues, though relapses are common. There are no paretic phenomena, motor or sensory, but temporary weakness of a limb may occur.

In all the above forms of chorea, the kind of movement is the same, and it must be due to a disorder of the co-ordinating centre. The movements are co-ordinated, but in a disturbed sense. They are in no-wise convulsive, as in tetanus or epilepsy. The spinal cord was long assumed to be the site of co-ordination, and decapitated animals certainly present co-ordinated movements, but Legros and Onimus observed such movements when the cord was affected close to the medulla oblongata. They therefore selected the spinal cord (the cells of the posterior horns) as the site of co-ordination, but assumed an indirect cerebral influence. This is by no means a clear explanation, especially since chloral suspends choreic movements in animals, which fact speaks for the brain itself as the site. Moreover, other reasons support the last view—viz., the psychic alterations (whining voice, pseudo-intoxication, irritability, and even hallucinations, ecstasy, and delirium); the frequency of hemichorea; the frequent participation of the facial nerve; and, finally, the undoubted importance of psychic influences as causes of the disease. Fright is a very frequent cause of chorea, and the so-called 'traumatic influences' often act through fright.

To conclude, then, there is irritation of the still unknown co-ordination-centre in the brain. This may occur either from material causes (neoplasms, &c.), or from causes usually called 'dynamic' (psychic influences, reflex excitations?), or from changes in the blood (anæmia, certain infectious fevers), or lastly, from rheumatism. It is still contested whether chorea is rheumatic in itself, or a reflex neurosis caused by rheumatic endo- or pericarditis. The author personally thinks that the heart has nothing to do with chorea, and that the embolic theory is especially untenable. For, if it were true, how would perfect recovery be the usual result? Besides, in numberless cases the heart is found quite healthy. Chorea has been found to exist with rheumatic apyretic torticollis. The rheumatic process itself is the essential cause of chorea, whether this process begin in the blood or in the nervous system. E. J. EDWARDES, M.D.

ARTICLE 2303.

SCHENKER ON THE OPERATIVE TREATMENT OF EMPYEMA.

OF the three methods in use for the treatment of this condition, the author (*Jahrbuch für Kinderheilkunde*, Band xx., Heft 2) considers that the first, simple aspiration, should be abandoned. The other two, puncture with the cannula left in, and open incision, are about equally favourable in results; but the former, being easier of performance, especially in private practice, is to be preferred where possible.

The puncture is made under antiseptic precau-

tions in the postaxillary line not lower than the seventh interspace. The spray is kept up as long as the pus flows, to avoid the inspiration into the pleural cavity of air that has not been disinfected. When the cavity has been evacuated, a lukewarm 1 per cent. solution of thymol is injected. The cannula is left in, a piece of salicylic wool is placed over it, and the whole is secured by a bandage. The dressing is changed once or twice a day according to the quantity of pus flowing, and, especially if there be blood on the wool, the injection of thymol is repeated. When the lung begins to expand, the cannula is removed and an India-rubber drainage tube substituted. The author gives reports of eighteen cases. [But he has rather illogically included some of simple hydrothorax; and, as these are useless for comparison, the reporter has omitted them. —*Rep.*] Much abbreviated, the cases are as follows.

1. A girl, aged 2½ years, had left empyema; a puncture was made and the cannula left in; a 1½ per cent. carbolic injection was made. She had a relapse; the ribs were overlapping, one was resected. A 40 per cent. carbolic injection was made. A large cannula was left in, with a tube attached, dipping into carbolic solution. Recovery took place in three months. 2. A girl, aged 3¼, had left empyema. The cannula being blocked, the puncture was enlarged by incision; the cannula, with a tube, being re-introduced after the evacuation of pus. Recovery followed in twenty-seven days. 3. A girl, aged 11 months, had left empyema. Aspiration was performed; but the cannula becoming blocked the operation was abandoned. The rest of the pus was absorbed. Recovery took place at the end of one month; but there was still a little dulness. 4. Right empyema in a girl aged 4 was aspirated three times, but returned each time, and finally 'pointed.' An incision was made, and 2 per cent. carbolic solution injected; a drainage-tube was applied. Recovery took place in two months from the last operation. There was no spinal curvature. 5. A boy, aged 6, had right empyema. Aspiration was performed; a relapse followed, with œdema and ascites, but no albuminuria; then intercurrent scarlatina. A second aspiration was made; again œdema followed, with albuminuria. The child died. At the *post mortem* examination, nephritis, &c., were found. 6. A girl, aged 2¼, had left empyema. Aspiration was performed; the cannula being blocked, the operation was interrupted. Next day, aspiration was repeated a little in front of the first puncture. The patient became feverish, and, not doing well, was removed by her friends. 7. A girl, aged 5, had left empyema. Aspiration was performed; the fluid returned; the patient was feverish. A puncture was made, and the cannula left in; an injection of one-third per cent. solution of salicylic acid was made and repeated daily. Three days later, the patient coughed up a quantity of pus. The pus from the wound was fetid, and there was pain in the side. Carbolic injections were substituted, and a drainage-tube was put in place of the cannula. Pain then disappeared, and the wound healed in five weeks. There was no relapse. 8. A girl, aged 6, had right empyema. A puncture was made, and thymol solution injected; the cannula was left in. Lister's dressing was applied; the drainage-tube replaced a cannula on the twenty-fifth day. Complete recovery followed in four months. 9. A boy, aged 7, had left empyema. Aspiration was first done; afterwards puncture with drainage. Death took place in six weeks from tuberculosis. 10. A boy, aged 4½, had right empyema. Aspiration, and afterwards puncture, were performed; the cannula was left in; daily irrigation was practised. A drainage-tube was applied on the tenth day. On the thirty-second day there was high temperature; the empyema was pointing below the fistula. An incision was made, and the abscess-cavity was irrigated. Complete recovery followed fourteen weeks after puncture. 11. A girl, aged 2 years, had left empyema, forming an immense abscess reaching from the loins to the spine of the scapula. An incision was made; and solution of thymol injected. Three drainage-tubes were left in, and the whole covered with salicylic wool. On the fiftieth day, the child had an intercurrent attack of measles. On the eighty-sixth day the wounds had healed, and the lungs were nearly normal. 12. A boy, aged 3½, had left empyema. Aspiration was followed by relapse. Puncture was then made, with thymol injection; the cannula was left in. On the fifth day, an intercurrent attack of measles took place. Complete recovery followed on the seventy-seventh day. 13. A boy, aged 6, had left empyema. Aspiration was followed by relapse. A puncture was made, and thymol injected; the cannula was left in; afterwards a drainage-tube. Recovery had taken place on the fiftieth day. 14. A girl, aged 5, had left empyema. Aspiration was performed. Recovery followed in four weeks. 15. A boy, aged 2, had empyema pointing in the left axilla. An incision was made; the ends of two ribs were found carious, and were resected. A thymol injection was administered, and a drainage-tube left in. Complete recovery followed in twenty-nine days. 16. A cyanotic girl, aged 5 months, had left empyema. A puncture was made, and the cannula left in. Thymol injection was repeated daily. She was removed by friends, with the wound still discharging.

Ralph W. Leftwich, M.D.

Article 2304.

GOODRIDGE ON THE CONTAGIOUSNESS OF ERYSIPELAS.

Dr. H. F. A. Goodridge, in the *Practitioner* of Dec. 1883, p. 471, contributes an able paper on the contagiousness of erysipelas considered with reference to recent researches.

The author commences by stating that cases of facial erysipelas are often admitted into medical wards, and the disease is never known to spread from bed to bed. Again, husband and wife have often occupied the same bed, without the disease being communicated from one to the other. The value of such facts is next inquired into, as objections to the current doctrine that the disease does possess the property of contagiousness. Dr. Goodridge has suffered from three attacks of erysipelas of the head and face. In the first attack, he was suffering from a gum-boil; there were some cases of erysipelas in the neighbourhood. Vomiting suddenly came on, with rigors and rise of temperature, followed by redness and tension over the right malar bone. The attack was sharp, and produced marked constitutional disturbance. On the second occasion he had been exposed to a hot sun, and, without any breach of surface, he experienced a feeling of heat and stiffness over the right malar bone, lasting for two or three days, and followed by desquamation, but there was no rise of temperature and no constitutional disturbance

The third attack occurred after the author had entered for a few minutes a ward in which there were a number of cases of erysipelas. At the time he happened to have one or two little sores on his head from using a hard hair-brush; within twenty-four hours, rigors and marked constitutional disturbance supervened. From personal and practical experience Dr. Goodridge concludes that cases of facial erysipelas are of two kinds; the infective and the non-infective, or, as he terms them, true genuine erysipelas and spurious or pseudo-erysipelas.

Turning next to the affirmative sid of the question, no lack of instances will be found of its propagation by contagion. The evidence of a *contagium vivum* has been demonstrated by histologists; and lately it has been shown by Dr. Fehleisen, of Berlin, that there is a species of bacterium peculiar to erysipelas.

The micrococcus was cultivated outside the body, and in the course of two months fourteen generations were produced. The same experiment was tried with the organisms found in the pus of pyæmic and other wounds, but these never behaved in a like manner; so that the mode of growth of the micrococcus was found to be characteristic. Next, the cultivated germs were introduced into wounds of healthy animals. Nine rabbits were inoculated on the tip of the ear, and in eight cases a marked attack of erysipelas followed.

Dr. Fehleisen then inoculated the human subject with the pure and the cultivated micrococci. He did so on the principle that an attack of erysipelas has been proved beneficial in such diseases as cutaneous tumours, lupus, &c. In six cases of this sort the experiments were instituted, and in all the characteristic phenomena were developed within from fifteen to sixty hours. It may be added, a beneficial therapeutical effect was obtained in nearly every instance.

Dr. Fehleisen also demonstrated that aërial infection is possible, and thus the doctrine of the spontaneous origin of erysipelas is shaken.

The experiments also showed that there is a certain immunity acquired by a previous attack, and the question of distinction of erysipelas on this ground from other zymotic diseases resolves itself into a mere question of degree.

RICHARD NEALE, M.D.

ARTICLE 2305.

BURRESI, DE RENZI, CANTANI, AND CAPPARELLI ON DIABETES MELLITUS.*

VARIOUS points in connection with diabetes have of late been occupying the attention of Italian observers. De Renzi calls attention to the very different prevalence of the disease in different places. In Naples it is frequent. In Genoa it is rare. In some districts of India it is very common. In St. Petersburg, during several years, not a single case was observed. He agrees with the opinion that ascribes the greater frequency to a diet almost exclusively vegetable. There must, however, be some other more powerful influence at work, as diabetes is rare or absent in some places where a vegetable diet is used. He considers the disease to be one of the nervous system. He notes also that he has always observed a marked diminution of muscular power. Capparelli relates a case in which diabetes arose after long-standing disease of the pancreas. The pancreatic mischief was diagnosed during life by the seat of the pain and by suppuration corresponding to the position of the organ; pancreatic calculi came from the fistulous opening; the secretion resembled saliva, and was more abundant from five to seven hours after dinner; fatty diarrhœa alternated with constipation. The author leaves it to others to trace the connection between the two diseases.

In regard to the amenability of diabetes to treatment, opinion is somewhat divided. On the one hand, Prof. Primavera holds that it is completely curable, no matter what the intensity of the disease may be, or how far advanced it may be. Prof. Cantani thinks it curable if treatment is commenced in time and rigorously carried out. On the other hand Burresi (now removed by death from the controversy), De Renzi, and others, do not think that the severer forms of the disease admit of what can properly be called a cure. Most observers think that drugs are of comparatively little use, though various remedies have been vaunted. Burresi records five cases in minute detail; and infers the worthlessness of lactic acid, copper, iodoform, glycerine, and arsenic. He thinks there are two varieties of diabetes; one mild, occurring in eaters of starchy foods, may in certain places be susceptible of a temporary cure; the other severe, occurring in flesh-eaters, is altogether incurable. Professor Cantani, who, from an experience of more than 600 cases, thinks that if taken in time the disease can certainly be cured, relates five fatal cases. As regards treatment, his whole confidence is in a suitable and rigorously maintained dietary. He has tried one after another the various drugs recommended, salicylic acid, strychnia, opium, the bromides, iodoform, &c., besides electricity; and, though he has used them for long periods and in increasing doses he has found them of no value, or useful only in cases where the diabetes was dependent on some transitory condition (mellituria), and where, if left alone, it would get well of itself. Professor de Renzi considers it important that fresh vegetables and wine should be given in addition to animal food, eggs, and fish. He names specially chicory (Cichorium intybus), endive (Cichorium indivia), and the cabbages (Brassica oleracea). The use of green vegetables and of wine prevents the azoturia and the wasting that follow an exclusively animal diet, and reconciles the patient to the restrictions in his food. When the glucosuria does not disappear with a mixed diet of this character, no advantage will be gained by confining the patient to animal food alone; in fact, such a course frequently causes a slight increase in the quantity of sugar. Glycerine, if given in large doses, from 150 to 300 grammes, increases the amount of glucose. It always produces, however, an increase in the weight of the body, unless diarrhœa or some other complication annul its effect. It augments the quantity of urine and diminishes the amount of urea in it. Professor de Renzi regards it as an excellent substitute for sugar to the diabetic. From 40 to 300 grammes were taken daily; that is, a much greater quantity than is usually recommended. Iodoform produced

* BURRESI.—On the Curability of Diabetes. (*Lo Sperimentale*, March and June 1883.) DE RENZI.—On Diabetes Mellitus. (*Giorn. Internaz. delle Sci. Med.*, Fasc. 9 and 10, 1883.) CANTANI.—Clinical Histories of five fatal Cases of Diabetes with Necropsies. (*Morgagni*, Fasc. 1; *Riv. Clin. dell' Univ. di Napoli*, No. 1, 1883.) CAPPARELLI.—The Pancreas and Diabetes. (*Morgagni*, Fasc. 7; *Riv. Clin. dell' Univ. di Napoli*, No. 8.)

some slight benefit, from two to three grammes being taken a day. No marked or constant action was obtained from pilocarpine, duboisine, kairine, &c. An infusion of coca leaves lessened somewhat the secretion of urine.

William R. Huggard, M.D.

SURGERY.

RECENT PAPERS.

2306. Tilden, Dr. G. H., and Watson, Dr. F. S.—Internal Urethrotomy. (*Boston Med. and Surg. Jour.*, No. 17, 1883.)

2307. Otis.—Hæmorrhage after Division of Urethral Stricture. (*Philadelphia Med. Times*, Jan. 12.)

2308. Stokes.—The Radical Cure of Hernia by Peritoneal and Intercolumnar Suture. (*Dublin Jour. of Med. Science*, February.)

2309. Barton.—The Radical Cure of Inguinal Hernia.

2310. Küster.—The Treatment of Cancer of the Breast. (*Archiv für Klin. Chir.*, Band xxix., Heft 4.)

2311. Lev, J.—On the Treatment of Strangulated Hernia. (*Vratch*, 1883, No. 29, p. 460.)

2312. Koltchevsky. — On a Case of Incarcerated Hernia Cured by Faradisation. (*Vratch*, 1883, No. 24, p. 381.)

2313. Voloshkevitch.—On the Treatment of Strangulated Hernia. (*Vratch*, 1883, No. 24, pp. 381–82.)

2314. Krasovsky, N.—On Two Cases of Reduction of Strangulated Hernia by Finkelstein's Method. (*Vratch*, 1883, No. 29, p. 460.)

2315. Rivington.—Wound of the External Carotid Artery by a Stab in the Parotid Region. (*Brit. Med. Jour.*, Feb. 1884, p. 222.)

2316. Bryant.—Treatment of Irreducible Hernia. (*Ibid.*, Feb. 1884, p. 307.)

2317. Mitchell.—Castor-oil as a Lubricant in Catheterisation. (*Lancet*, Feb. 1884, p. 283.)

2318. Batterham.—Vesical Injections in Cystitis. (*Ibid.*, Feb. 1884, p. 282.)

2319. Ogston.—Flat-Foot and its Cure by Operation. (*Ibid.*, Jan. 1884, p. 152.)

2320. Walsham.—The Treatment of Flat-Foot. (*Ibid.*, Jan. 1884, p. 155.)

2321. Ellis.—The Treatment of Flat-Foot. (*Ibid.*, Feb. 1884, p. 273.)

2322. Cadge.—Stone in the Female with Sacculated Bladder. (*Ibid.*, Jan. 1884, p. 6.)

2323. Harrison.—A Study on the Dead Subject, relating to Catheterism of the Ureters. (*Lancet*, Feb. 1884, p. 198.)

2324. Crede, B.—Extirpation of the Spleen. (*Gazz. degli Ospitali*, and *Gazz. Med. Ital. Prov. Veneta*, Jan. 12, 1884.)

2325. Carloni, L.—A large Vesical Calculus, weighing 65 grammes, extracted by the Urethral Process of Colot-Dubois in a Woman. (*Lo Sperimentale*, Jan. 1884.)

2326. Gussenbauer.—A Case of Sword-Swallowing. (*Wiener Med. Blätter*, Dec. 20.)

2327. Karg.—Treatment of Fracture of the Thigh in Old People. (*Centralbl. für die Ges. Therap.*, Nov. 1883.)

2328. Baum.—Resection of Wounded Blood-Vessels. (*Deutsche Med. Wochensch.*, Jan. 17.)

2329. St. Martin.—Rupture of the Tunica Vaginalis in Hydrocele. (*Revue Méd.*, No. 11, 1884.)

2330. Fournier.—The Treatment of Balano-posthitis in Diabetic Patients. (*Conc. Méd.*, and *Revue de Thérap.*, Feb.)

2331. Barette.—Treatment of Fissure of the Anus by Dilatation. (*Revue de Thérap.*, Feb. 1884.)

2332. Guillemin.—Aneurism by Anastomosis. (*Revue Méd de l'Est*, No. 4, 1884.)

2233. Guyon.—Hæmaturia caused by Retention of Urine. (*Jour. de Méd. et de Chir. Prat.*)

Art. 2306. *Tilden and Watson on Internal Urethrotomy.*—In the *Boston Med. and Surg. Jour.*, No. 17, 1883, there is an analysis contributed by Dr. G. H. Tilden and Dr. F. S. Watson of nineteen cases of urethral stricture, treated by Otis's operation of internal urethrotomy. This analysis is followed by some observations on the possible dangers and complications of the operation, and on its advantages as compared with those of other plans of dealing with urethral stricture. Divulsion, the authors hold, is undoubtedly a safe operation, and temporarily very effective, but still is open to adverse criticism. It is a rough and indiscriminating application of force, which does not recognise the individuality of the urethra. That one urethra differs from another in calibre, and that the average calibre of the urethra is larger than the largest sized divulsor in ordinary use, are already demonstrated facts ; and by reason of these facts it follows that many strictures will remain incompletely divulsed, and therefore inadequately treated by this operation. The wound made by the divulsor is a tear, the extent and direction of which are entirely out of the control of the operator, being probably determined more by the size and physical peculiarities of the stricture than by any other factor. Such a lacerated wound of the urethral mucous membrane, in cases of small stricture, is likely to be transverse as well as longitudinal, and to result eventually in that for which it is but a temporary remedy, namely, stricture of the canal. After divulsion, it is as necessary for the patient to introduce an instrument for an indefinite period of time, as after treatment by gradual dilatation. These faults are avoided in Otis's operation. In each case, the work done is graduated exactly to the predetermined and individual size of the urethra, and a longitudinal incision is made through the stricture put on the stretch, that it may be more completely divided. Reybard, of Paris, has found by experiments on animals, that longitudinal incisions of the urethra do not of themselves result in stricture of the canal ; and confirmatory evidence in the same direction has been afforded by the details reported by M. Perrin of three necropsies upon human subjects who had during life been subjected to internal urethrotomy. The authors state that the chances of constitutional disturbance and danger to life, in consequence of operations upon the urethra, depend much more upon the condition of the patient than upon the method of operation. Examination has been made of the surgical records of the Massachusetts General Hospital for the past ten years with reference to the frequency of stricture, with the following results. In 47 cases of stricture, treated by gradual dilatation there was one death, and constitutional trouble in 36·17 per cent. of the cases. In 113 cases treated by divulsion during the same period there were two deaths, and constitutional disturbance in 26·6 per cent., or in 30 cases. The average length of time for which these cases of divulsion were confined to the hospital was sixteen days. Thus the treatment by gradual dilatation was productive of constitutional disturbance in a larger proportion of cases than treatment by divulsion. It is not rare, the authors point out, to see cases recover without an unfavourable symptom after divulsion or internal urethrotomy, which have

previously presented severe general symptoms during treatment by gradual dilatation. In cases where gradual dilatation produces chills and fever, repeated at each introduction of a bougie, this method of treatment should not be persisted in, but divulsion or internal urethrotomy should be done at once. An analogous relation holds between old-fashioned lithotrity, as done in several sittings, and Bigelow's operation, which affords immediate and permanent relief. In cases of stricture of large calibre, uncomplicated by disease, and where there is no manifest dysuria, the converse of the above, the authors think, is probably true, and internal urethrotomy causes constitutional disturbance in a larger proportion of cases than gradual dilatation. In these latter cases, however, the chill and fever are not of serious import, and are to be regarded, it is asserted, as an unpleasant incident rather than a serious drawback of an operation which offers fair promise of a permanent cure. Internal urethrotomy is held to be unsuited to stricture situated beyond the bulb, by reason of a supposed risk of uncontrollable hæmorrhage. According to the experience of the authors, by far the largest number of strictures are situated in the anterior portion of the urethra within four inches of the meatus. In conclusion, the authors state that they wish to be considered as reasonable advocates of internal urethrotomy as done by Dr. Otis's method. They hold that, whilst not proper in all cases nor always successful, it is an operation which, when rightly done in suitable cases, is the one of all others which, without danger to the patient, brings to him the most speedy relief and the best chances of a radical cure.

2307. *Otis on Hæmorrhage after Division of Urethral Stricture.*—In the course of a lecture on 'Urethral Stricture' (*Philadelphia Medical Times*, Jan. 12, 1884), Dr. Otis pointed out, as a very curious fact, that in a very considerable proportion of cases of internal urethrotomy there is no bleeding worthy of the name of hæmorrhage. A few drops of blood, perhaps a few drachms, may be lost at the time of the operation, and then scarcely more than a few drops at each introduction of the sound, until complete healing has taken place. There are certain cases, however, in which persistent bleeding occurs for some days after the operation, unless some means be taken to prevent it. These hæmorrhages may take place after division, not only of internal urethral stricture, but also of a constricted meatus. Such experiences, Dr. Otis states, teach us that every case, whether of division of the meatus or of the deeper urethra, should be treated as though it were a case in which hæmorrhage must surely occur, so that the surgeon may not be taken unawares. This surgeon makes a point of never, under any circumstances, dividing the external urethral orifice without being thoroughly satisfied that the case will be well taken care of for three or four days, although no bleeding may occur at the time of the operation. Reference is made to a case in which there was a loss of a pint of blood within an hour after division of the meatus. Dr. Markoe, it is stated, was once called to a case of hæmorrhage from the urethral orifice, in which the patient had died from this hæmorrhage before he arrived. This excessive bleeding, Dr. Otis points out, is not at all likely to occur ; but still the surgeon is recommended to take all precautions, and not to speak of division of the meatus as a trifling operation. In cases of division of the orifice alone, Dr. Otis takes a couple of pieces of pasteboard, and applies these on each side of the penis, retaining them either by rubber bands or by means of a bandage with the end divided into four or six tails. This apparatus, in favourable cases, need be retained but a very short time, but should be adopted when hæmorrhage recurs during urination and erection. When the hæmorrhage is deep down anywhere in the pendulous portion of the urethra, it is usually sufficient to put an ordinary bandage around the penis. This, as a rule, Dr. Otis states, prevents hæmorrhage ; but it is always well in such cases to make a little pad and put it in the perinæum, and take a stick, the end in the shape of a crutch, to pass from the foot of the bed up to the perinæum, that, if necessary, the patient may make pressure against the pad in the perinæum, so as to occlude the urethra at that point, and thus prevent the blood from going back into the bladder. Staining of the urine drawn off directly through the catheter, and subsequent vesical tenesmus, indicate that there has been bleeding into the bladder. This accident is not likely to occur when the division has not been made further back than four inches from the orifice, but it is not unfrequent when the cut is at or beyond four inches. Therefore it is desirable to have an apparatus which can always be easily extemporised, which will secure the patient against hæmorrhage into the bladder. All that the surgeon will then have to do is to make pressure at some point anterior to the cut. In cases of much bleeding after internal urethrotomy, Dr. Otis takes an ordinary gum-elastic tube, or some other tube with an open end, and passes it down beyond the cut, retaining it by means of a bandage. If the presence of the instrument cause discomfort, it can be removed ; but, as a rule, the patient will bear it long enough to arrest the hæmorrhage. If this method fail, Dr. Otis introduces an ordinary catheter beyond the cut, making pressure on the perinæum, and then gently injects water at a temperature of 120° F. Dr. Otis would not hesitate to carry the temperature up to 125° ; and he alludes to a case in which the patient gradually carried the temperature of injections for gonorrhœal trouble up to 130° with perfect immunity. But in obstinate bleeding from the urethra he would begin with a temperature of about 118° ; and he thinks that this would avert any hæmorrhage that is likely to occur after internal urethrotomy.

2308. *Stokes on the Radical Cure of Hernia by Peritoneal and Intercolumnar Suture.*—Mr. W. Stokes, in a paper read before the Surgical Section of the Academy of Medicine in Ireland (*Dublin Jour. of Med. Science*, Feb. 1884), reports four cases in which a new proceeding of peritoneal and intercolumnar suture was practised for the radical cure of hernia. Excision of the sac, it is stated, necessitates a difficult and tedious dissection, and is considered unsurgical for the simple reason that it is unnecessary, and may be fraught with much secondary local trouble, and possibly constitutional peril. The author describes the plan which has of late been adopted in the Richmond Hospital in the operative treatment of suitable cases of hernia, and which, as compared with the application of a ligature round the neck of the sac, or this procedure coupled with excision of the sac below the ligature, is a simpler and, at all events, an equally efficacious procedure. This operation consists in the insertion through the opened neck of the sac, and close up to the external abdominal ring, of one or more deeply inserted carbolised

catgut sutures, according to the size, width, and depth of the neck, and in the subsequent approximation or closure of the canal and pillars of the ring, by the insertion of two or more sutures of a stronger and more durable material, as chromicised catgut, carbolised silk, or silver wire. This procedure, consisting in a dual system of suture, one being peritoneal and the other intercolumnar, will, the author believes, be found to be attended with satisfactory results in the great majority of cases, always provided that rigid Listerian antiseptic precautions are taken during and subsequently to the operation.

2309. *Barton on the Radical Cure of Inguinal Hernia.*—On Jan. 11, Mr. John K. Barton related to the Academy of Medicine in Ireland the particulars of three cases in which he had performed, with some modification, Gross's operation for the radical cure of hernia. This consists in cutting down upon the neck of the sac, refreshing the edges of the opening of descent, and approximating these with wire sutures, which are retained either permanently or until complete consolidation has been effected. Mr. Barton does not refresh the edges of the ring, but simply draws them into close contact by strong silver wire, which may, he thinks, as a rule be left in with decided advantage. The three cases, it is held, show that the direct operation for the radical cure of inguinal hernia is a safe one when due precautions are taken; further, that it is one easily performed, and that it is necessary in a bad case, and probably better, if not absolutely necessary, in all cases; that the wire sutures should be left in to form a permanent tie and firm barrier against the hernial protrusion.

2310. *Küster on the Treatment of Cancer of the Breast.*—In a paper read at the last congress of German surgeons, and published in the *Archiv für Klinische Chirurgie*, Band xxix., Heft 4, Professor Küster insists on the necessity in every operation for the removal of mammary cancer, of excising at the same time the axillary glands, even though these be apparently healthy. Up to the end of 1882 this surgeon had operated in 132 cases of cancer of the breast. In 15 of these cases the axillary glands had not been removed, and in 13 of these speedy relapse occurred. In the remaining 117 cases the glands were removed from the axillæ, and in two only of these instances did Küster fail to find on microscopic examination that these glands had not become diseased. The mortality from this radical operation is undoubtedly high, though below that of a number of cases reported by Billroth. Removal of the axillary glands adds to the danger of excision of mammary cancer, as a careful dissection has to be made in a very vascular region, and a very large wound is formed which demands free drainage. Of 60 patients operated on by Küster, three years and more before the preparation of his paper, 13, or 21·66 per cent., remained free from relapse; and of 81 patients who had survived the operation for at least two years, 16 then remained in good health. W. Johnson Smith.

2311. *Lev on Reduction of Strangulated Hernia by Faradisation.*—Dr. J. Lev (*Vratch*, 1883, No. 29) details the case of a clergyman, aged 70, with a right scrotal hernia of twenty years' standing, whom he first saw fourteen hours after its incarceration, and when all usual means had been tried and failed. Herniotomy was decided upon by three medical men present, but, on the author's advice, faradisation was previously resorted to. One of the electrodes of a Spamer's apparatus was applied alternately to the neck of the tumour and to the hypogastrium, the other to the fundus of the hernia. Within ten minutes, the swelling (which had been as large as a man's head) became smaller and softer, and, on renewal of manipulations, rapidly dwindled away.

2312. *Koltchevsky on Reduction of Incarcerated Hernia by Faradisation.*—In the *Vratch*, 1883, No. 24, p. 381, Dr. Koltchevsky, of the Starovskolsky Regiment, records the case of a soldier with three hours' incarceration of a right scrotal hernia. Taxis and a warm bath having failed, the author applied one of the electrodes of Gaiffe's apparatus to the tumour, and the other to the abdominal wall. In a quarter of an hour faradisation brought about the result desired.

2313. *Voloshkevitch on Reduction of Strangulated Hernia by Faradisation.*—Following the instances of Bronstein, Rosenhart, Suprunenko (see the London Medical Record, March 1883, p. 82), and Pargamin (*ibid.*, December, p. 504), Dr. V. Voloshkevitch, of Ishim (*Vratch*, 1883, No. 24), tried electricity in the case of a peasant, aged 34, with the right scrotal hernia, which had been incarcerated for ten hours, and remained so in spite of manipulations and ether-irrigations, as recommended by Finkelstein. After five minutes' faradisation, the tumour, which was of the size of a man's fist, disappeared tracelessly. The author used Spamer's apparatus with two cells. The cathode was applied to the base of the tumour, and the anode to the neck of the hernial sac.

2314. *Krasovsky on Two Cases of Reduction of Strangulated Hernia by Ether Irrigation.*—In the *Vratch*, 1883, No. 29, p. 460, Dr. N. Krasovsky, of the Salobeliaksky Zemsky Hospital, reports two cases of strangulated inguinal hernia, in which he successfully used irrigations of the tumour by ether. [It had been recommended by Dr. Finkelstein, of Roumania, in the *Berlin. Klin. Wochensch.*, July 14, 1882, who reduced in this way fifty-four of fifty-eight incarcerated hernia in his eleven years' practice.—*Rep.*] In one of the patients, a clergyman, the strangulation was of fifteen hours' duration; in the other, a young peasant, it lasted thirteen days, and was accompanied by fæcal vomiting. Taxis entirely failed in both of them. In the first case three ounces of ether, and in the second five ounces, were poured upon the swelling, and it disappeared on resuming the manipulations. V. Idelson, M.D.

2315. *Rivington on Wound of the External Carotid Artery by a Stab in the Parotid Region.*—Mr. Walter Rivington (*Brit. Med. Jour.*, Feb. 1884, p. 222), at a meeting of the Clinical Society, gave notes of a man, aged 31, who was stabbed by his wife in the left parotid region, on Dec. 24. Hæmorrhage ceased before he was brought to the hospital, and the wound was sewn up. On Dec. 30 and 31 hæmorrhage recurred, but it was arrested by pressure. Swelling of the left side of the face and erysipelas supervened, necessitating incision and the insertion of drainage-tubes. On Jan. 15 severe hæmorrhage occurred, which was arrested by pressure. On Jan. 16, Mr. Rivington saw him and removed the compress, whereon blood gushed out in a strong jet from the carotid artery behind the jaw; he then cut down upon the artery above the ordinary seat of bifurcation of the common carotid, and, passing a catgut ligature round one of the trunks (either the

common or the external carotid), tied it so as to stop the current without dividing the coats of the vessel. The wounded vessel was then tied above and below the opening. The ligature round the main trunk was then untied, but left *in situ*, and the wound was closed, the ends of the ligature passing out between its lips. The patient made a good recovery. The catgut ligature dissolved and came away from under the main trunk, spontaneously, on the sixth day after operation.

2316. *Bryant on Treatment of Irreducible Hernia, and an Improved Method of Adapting a Truss in all Forms of Hernia.*—Mr. T. Bryant, in the *Brit. Med. Jour.*, February 1884, p. 307, remarks that many surgeons are apt to regard a hernia irreducible, and, therefore, irremediable, without giving it sufficient care and trial. A hernia which has been down some weeks, and where no adhesions have formed, may be reduced by adopting rest in the recumbent position, associated with limited diet and the administration of small and repeated doses of saline purgatives, together with the local application of cold to the hernial protrusion. This treatment, to be effectual, should be persisted in for days, and, in some cases, for weeks. If no reduction be possible, the following plan is advised. A plaster-of-Paris mould of the hernia and the parts around its neck is taken. From this mould a 'cast' is made. Upon the 'cast' a metal plate of tin or copper is moulded and covered with wash-leather; it has then simply to be fixed to a spring or belt, and the instrument is complete. It forms a most efficient protection to the hernia, and keeps it in its place with great comfort to the wearer.

2317. *Mitchell on Castor-oil as a Lubricant in Catheterisation.*—Dr. Mitchell, in the *Lancet*, February 1884, p. 283, describes his practical experience of the use of castor-oil as a lubricant in catheterisation. Owing to its viscidity and tenacity, castor-oil is carried upon the catheter down to the prostatic portion of the urethra and to the neck of the bladder, whereas other substances leave the extremity of the catheter long before those parts are reached. [Castor-oil has long enjoyed, with many, a reputation as a lubricant.—*Rep.*]

2318. *Batterham on Vesical Injections in Cystitis.*—Mr. Batterham, in the *Lancet*, February 1884, p. 282, endorses Dr. Collins' remarks on p. 201, and remarks that a warm 1 per cent. solution of carbolic acid is most efficacious in allaying pain, lessening fetor, and muco-purulent discharges in cases of cystitis. Mr. Batterham describes the method of injecting the bladder by attaching a piece of India-rubber tubing to the catheter, on the other end of which there is a funnel. By lowering the funnel the urine can be drawn off; the funnel can then be filled with the solution and elevated; by this means the pressure and amount of fluid allowed to enter into the bladder can be very easily regulated.

2319. *Ogston on Flat-Foot and its Cure by Operation.*—Dr. A. Ogston, in the *Lancet*, Jan. 1884, p. 152, devises a method for the cure of flat-foot, which has been carried out with excellent results in seventeen cases. Strict Listerian principles are employed, and an incision is made, an inch and a quarter long, commencing about an inch from the tibia, so that the centre will be over the articulation of Chopart's joint. No important structures are divided; the vessels are to be tied with catgut. All the soft parts are cut through down to the head of the astragalus; after the caput tali has become visible, free access to the joint has to be obtained by separating the attachments of the ligamentous capsule to the edge of the scaphoid for a distance of half an inch on each side of the wound. The ligament is seized by a dissection-forceps, elevated, and detached from its insertion into the scaphoid; its connections with the periosteum and fibrous structures over the scaphoid being maintained as far as possible by cutting with the edge of the scalpel directed towards the toes, the blade lying parallel to the bone. In this manner, a T-shaped opening is made into the joint. The next step consists in taking a stout chisel, half an inch broad, bevelled on one side; this is held in the right hand with the bevelled side away from the caput tali, while by its means the articular cartilage is shaved away from the whole of the exposed surface of the bone over as great an extent as possible, a thin layer of the subcartilaginous bone being also removed, so that the cancellous structure is well laid bare. The chisel is next applied to the scaphoid, the bevelled side being held towards it, and by repeated shavings the denudation is carried as far as possible between the bones. In this manner each bone is bared of its cartilage; and if the arch be now restored to its normal position, the two surfaces are found to correspond, the head of the astragalus retreating into its normal position behind the scaphoid. The next step of the operation is to nail the bones together by ivory pegs. The joint is washed with 1 in 20 carbolic lotion and dressed in Lister's dressings, covered by a few turns of plaster-of-Paris bandage to steady the foot. The patients are kept in bed for two or three months, and in a week or two are able to walk freely.

2320. *Walsham on the Treatment of Flat-Foot.*—Mr. Walsham, in the *Lancet*, Jan. 1884, p. 155, describes a boot, with an accompanying plate, which he has found of much service in the treatment of cases of flat-foot, in which the deformity is well-marked, but is unaccompanied by rigidity. It differs from the boot with outside leg-iron in ordinary use, inasmuch as in place of the T-strap a broad band of solid rubber is substituted, so that continuous elastic tension is exercised on the sunken arch. A soft valgus pad is slid over the rubber strap, and so adjusted as to correspond, when in position, to the situation of the yielding arch.

2321. *Ellis and Others on the Treatment of Flat-Foot.*—Mr. Ellis, in the *Lancet*, Feb. 1884, p. 273, relates two cases of flat-foot treated on principles entirely opposed to those set forth by Dr. Ogston. The author recommends the exercising of the muscles of the leg, the great thing being to stand on tiptoe as much as possible. Mechanical boots are to be discarded. Mr. Noble Smith also draws attention to various plans of treatment in different kinds of flat-foot. Where the muscles are contracted, the author says there ought not to be any difference of opinion as to the advisability of performing tenotomy; but in the majority of cases of flat-foot there is no contraction, and therefore no need for tenotomy. Osteotomy should be reserved for those severe cases in adults which resist all other plans of curative procedure. Mr. Benham writes to say that he has found manipulative treatment effects cures more readily than the mechanical or instrumental treatment, except when the disease is advanced, and illustrates his remarks with notes of two or three cases.

2322. *Cadge on Stone in the Female with Sacculated Bladder.*—Mr. Cadge, in the *Lancet*, January 1884, p. 6, refers to a paper read by Dr. Hale White in March 1883, where the remark is made that out of 3,000 necropsies at Guy's Hospital, no instance of sacculated bladder in the female was noted. Mr. Cadge is of opinion that sacculation is not so rare, and reports a case in which it occurred. The cause of sacculated bladder is obstruction to the easy flow of the urine, which in the male, in nineteen out of twenty cases, is due either to enlargement of the prostate or to stricture; in the female, when it occurs, it is due probably to some growth round the meatus, which closes the opening, and thus causes an obstruction to the outflow of urine.

2323. *Harrison on Catheterism of the Ureters.*—Mr. Reginald Harrison, in the *Lancet*, Feb. 1884, p. 198, describes a method by which it is possible to catheterise the ureters. Experiments were made on the dead subject. Lateral lithotomy was performed on a middle-aged subject; the incision into the bladder was extended in front into the membranous urethra, and behind into the prostate. Through the opening thus produced, no part of the mucous membrane of the bladder could be inspected even with the use of suitable retractors. The cavity of the abdomen was then opened by a median incision above the pubes, sufficient to admit three fingers over the fundus of the bladder. By thus pressing down the bladder towards the perineal wound, the whole of the mucous surface could be brought into view, including the orifices of the ureters and the trigone. By this means it was found quite easy to catheterise the left ureter, and the right could be reached with a little trouble. It was also inferred that, with the hand in the abdomen, all hæmorrhage from the deeper incision was under control. The removal by this means of a calculus impacted in the vesical termination of an ureter seems feasible. Richard Neale, M.D.

2324. *Crede on Extirpation of the Spleen.*—Dr. B. Crede (*Gazz. degli Ospitali*, and *Gazz. Med. Ital. Prov. Venete*, Jan. 12, 1884) narrates the case of a man, in whom a large tumour, of the size of a child's head, existed in the region of the spleen. The tumour gave decided signs of fluctuation. The diagnosis remained uncertain between hydronephrosis and cyst of the spleen. On puncture with a trocar, about thirty ounces of clear yellow fluid, containing crystals of cholesterine, escaped. An incision was then made, extending from the rib to the crest of the ilium, and the membranous walls of the cyst and splenic pulp extirpated. The vessels of the peduncle were tied with a double ligature of catgut, and then divided; and the free peduncle was left within the abdomen. No drainage-tube was used. The wound was united and dressed antiseptically. The microscopic structure of the spleen was normal. Although the conditions of the wound continued to be favourable, the patient became daily more and more anæmic; so that, two months after the operation, the proportion of white corpuscles to red was one to three or four. From this date, however, things began to mend, and in four months and a half the patient was completely restored. As a commentary on this case, the author collects the statistics of thirty extirpations of the spleen. Sixteen of these terminated with the death of the patient. Of the fourteen remaining cases nine recovered, but suffered from hernia in the cicatrix of the long incision of the abdominal walls. In five cases only were accurate observations made on the state of the blood. The author concludes as follows. 1. In the adult the spleen can be extirpated without harm. 2. Extirpation of the spleen produces temporary disorder of hæmatopoiesis. 3. These disorders are compensated by function in excess of the thyroid body and marrow of the bones.

2325. *Carloni on a large Vesical Calculus in a Woman extracted by the Process of Colot-Dubois.*—A woman, aged 50, had suffered for some time from symptoms of stone in the bladder. Dr. Carloni, on examining her, found that a large stone was impacted in the neck of the bladder and upper part of the urethra. The bladder was full and the pain intense, and immediate relief was demanded. It was impossible to push the stone back into the bladder, so firmly was it impacted. A vertical incision slightly to the left, so as to avoid the clitoris, and oblique transverse incisions, were made in the walls of the urethra with a long straight bistoury, and the stone was seized and withdrawn with polypus-forceps. The hæmorrhage was very slight. The bladder was washed out with vinegar and water, and afterwards with carbolic solution (3 per cent.), and the wounds dressed with iodoform; the cannula of an enema-syringe was left in the urethra. The incisions were entirely healed on the sixth day, and complete power over the bladder was regained. The calculus weighed 65 grammes (or 16 drachms 43 grains); its circumference measured 12 centimètres (4·68 inches), its long diameter 54 millimètres (2 inches), its transverse diameter 45 millimètres (1·7 inch), its thickness 23 millimètres (8·97 inches). Chemically it consisted of urate of mammonia, oxalate of lime, and triple phosphate. G. D'Arcy Adams, M.D.

2326. *Gussenbauer on a Case of Sword-Swallowing.*—The *Wiener Med. Blätter* of Dec. 20 and 27 contains the report of a lecture by Prof. Gussenbauer, of Prague, on a recent case in his clinic. On June 4, 1883, a juggler, aged 19, was brought to the clinic with the history that on the previous evening, as he was displaying his feat of 'sword-swallowing,' an inadvertent movement of his head, in answer to the applause of the audience, had brought his upper incisors against the blade of the sword, which had broken off in his stomach. The first result was a feeling of impending suffocation, from which he was relieved by his father, also a sword-swallower, who pushed the fragment further down by means of his own sword, and enabled him to breathe easily again. A medical man called in at the time administered some tartar emetic, and the father endeavoured to assist its action by suspending his son by the heels for a few moments, so that the weight of the foreign body might assist its expulsion. As this did not succeed, he came under Dr. Gussenbauer's observation next day. The most careful sounding failed to discover any obstruction in either œsophagus or stomach; the abdomen was soft and not tender; no blood appeared on any of the instruments used; even in chloroform narcosis nothing could be felt; and, under such circumstances, Dr. Gussenbauer was compelled to wait for further indications before operating. In the afternoon, however, pain began to be complained of, and the temperature rose towards evening to 38° C. (100°·4 F.), although the abdomen was still soft, and not painful on pressure. The next morning the condition was much the same, but the temperature had risen to 101°·3 F.; the patient still complained of pain in the region of the left hypochondrium, especially when a tendency to

vomiting came on; and as this became more frequent, and associated with hiccough, operation was resolved upon. The abdominal walls were divided just below the ribs, and held apart by ligatures. Palpation of the stomach then revealed the presence of a hard straight foreign body in the left hypochondriac region, the upper end of which could not be felt, but evidently lay above the left lobe of the liver. After careful opening of the stomach, and releasing of the point of the sword from the glove-finger projection into which it had pushed the gastric walls, the entire fragment was removed, having a length of 27 centimètres (nearly eleven inches), and a breadth of three-fourths of an inch. In spite of the greatest care after the operation the patient sank, and died in two days, with symptoms of peritonitis. The necropsy showed perforation of the stomach, which must have begun before the operation, although it was not sufficiently advanced to be detected, and laceration of the œsophagus by the jagged upper end of the fragment, which had become embedded in the œsophageal wall, probably during the first induced attack of vomiting, aided by the suspended position. The fragment, being thus covered by the soft parts, was missed in the sounding. The coating of mucus which it would receive from the œsophagus would prevent the metallic sound from making any noise as it glided along the flat surface towards the stomach.

2327. *Karg on the Treatment of Fractures of the Thigh in Old People.*—Dr. Karg (*Centralbl. für die Ges. Therap.*, November 1883) has arranged a new method of putting up fractures of the thigh in old people, to avoid the bronchial complications which often result from the prolonged recumbent position. It consists in bending both hip and knee-joints at right angles, supporting the leg, and then fixing the whole limb by means of plaster of Paris. One patient who was thus treated could sit up comfortably at once, and was moved to an arm-chair in the second week; and the bronchitis which had threatened to come on while he was in the usual recumbent position was completely averted.

2328. *Baum on Resection of Wounded Blood-vessels.*—The *Deutsche Med. Wochensch.* of Jan. 17 refers to a case which has been published lately of resection of wounded blood-vessels, by Dr. Baum of Dantzig. The patient was a boy, aged 13, who cut himself in the thigh whilst making a wooden shoe. The bleeding from the wound was arrested by pressure until the arrival of the surgeon, who applied Esmarch's bandage. The boy was then removed to the hospital. The femoral vein was found to be wounded, and, under antiseptic precautions, 2 centimètres were removed, showing an incised wound through the anterior and posterior walls of the vein. On removing the bandage it was found that a branch of the femoral artery was also wounded in two places, and a similar section of that vessel was also removed. The wound healed in three weeks. Some slight discoloration of the toes and loss of sensation on the first day, with superficial necrosis of the edges of the wound, were all the unfavourable symptoms observed. Alice Ker, M.D.

2329. *St. Martin on Rupture of the Tunica Vaginalis in Hydrocele.*—According to the author (*Revue Méd.*, No. 11, 1884) this accident may happen spontaneously, or in consequence of a blow or strain. The patient feels a sudden and acute pain in the scrotum. The tumour changes its shape, and after a short time takes the form of a diffused œdematous swelling, which may extend as far as the abdomen. The fluid is generally soon reabsorbed, and the rent in the tunica vaginalis closes itself, but the hydrocele gradually regains its former dimensions. In some cases, hæmatocele and suppuration have been observed.

2330. *Fournier on the Treatment of Balano-Posthitis in Diabetic Patients.*—In a lecture summed up by Dr. Hamond (*Conc. Méd.*, and *Revue de Thérap.*, Feb. 1884), the author recommends washing the prepuce and glans after micturition with a solution of borax or bicarbonate of soda; powdered talc and oxide of zinc may then be dusted over the parts. In some cases, urethral injections with a solution of nitrate of silver (½ per cent.) give very good results. Phimosis is a frequent consequence of balano-posthitis in diabetic patients. When the glycosuria has ceased, circumcision can be performed without danger; but as long as the urine contains sugar, the operation is contra-indicated, as it may be followed by very serious accidents and death.

2331. *Barette on the Treatment of Fissure of the Anus by Dilatation.*—This method is discussed at some length in the *Revue de Thérap.* for Feb. 1884. Gradual dilatation is not recommended by the authors, but forced and rapid dilatation is said to give excellent results. The index fingers may be used for the purpose, but the thumbs are generally too short. Mollière, Verneuil, Trélat, and others, make use of expanding specula of various forms. An enema must be given on the day before the operation, and the administration of an anæsthetic is generally advisable. The dilatation is known to have been sufficient when two fingers can be introduced together into the rectum without feeling of resistance. The patient can resume his occupation after two days. Incontinence of fæces does not occur after rapid dilatation.

2332. *Guillemin on Aneurism by Anastomosis.*—The author has described, in his inaugural dissertation (*Revue Méd. de l'Est*, No. 4, 1884), an interesting case of this affection in a girl aged 17. The tumour, which was purplish and soft, measured 13 centimètres in the vertical, and 6 in the transverse diameter, and occupied the left temporal, auricular, parotid, and submaxillary regions; it had gradually developed itself out of a small angioma which existed at birth in front of the left ear. The pulsations and bruit, which were very distinct, could be stopped by compression of the left carotid artery. Professor Gross, of Nancy, tied it, and at the same time produced rapid coagulation of the blood in the tumour itself by means of galvano-puncture. Four months after the operation, the tumour was small, pale, and hard, and the pulsations had disappeared. M. Guillemin thinks that these aneurisms are caused by multiple communications between the arteries and veins, an opinion already emitted by Broca and Michon.

2333. *Guyon on Hæmaturia caused by Retention of Urine.*—The author states (*Jour. de Méd. et de Chir. Prat.*, Art. 12,544) that long-continued retention of urine is always accompanied by a considerable venous congestion of the bladder, prostate, kidneys, and tissues around the bladder. When the bladder is emptied rapidly and completely with a large catheter, the sudden diminution of pressure may cause ecchymoses in the mucous membrane, and sometimes abundant hæmorrhage, syncope, and death. In these cases, one half only of the urine should be drawn off

very slowly. It is a good plan also to inject into the bladder 150 grammes of a 4 per cent. solution of boracic acid, so as to prevent decomposition.

J. S. Kaeser, M.D.

MEDICINE.

RECENT PAPERS.

2334. Richardson. — Morphia Habitués and their Treatment. (*Asclepiad*, Jan. 1884.)

2335. Sharkey.—The Treatment of the Habitual Abuse of Morphia. (*Lancet*, Dec. 1883, p. 1120.)

2336. Fowler.—Subcutaneous Nodules in an Adult not the Subject of Rheumatism. (*Brit. Med. Jour.*, January, p. 107.)

2337. Vaccinia and Variola. (*Brit. Med. Jour.*, Dec. 1883, p. 1250.)

2338. Clark, Sir A.—Catheter Fever. (*Brit. Med. Jour.*, Dec. 1883, p. 1221.)

2339. Atkin.—Gangrenous Enteritis. (*Brit. Med. Jour.*, February, p. 320.)

2340. Ogston.—The Theory of the Contagiousness of Pulmonary Consumption. (*Ibid.*, February, p. 219.)

2341. Sedgwick.—Suppression of Urine in Perforation of the Stomach from Gastric Ulcer. (*Brit. Med. Jour.*, Feb. 1884, p. 313.)

2342. Allbutt.—Alcoholic Leg-Pains. (*Brit. Med. Jour.*, Feb. 1884, p. 397.)

2343. Bell, J. V.—Occlusion of both Ureters: Death by Syncope. (*Lancet*, Dec. 1883, p. 1040.)

2344. Coughs. (*Lancet*, Dec. 1883, p. 1054.)

2345. Diver.—A Remarkable Series of Cases of Scarlet Fever. (*Lancet*, Jan. 1884, p. 110.)

2346. Hall.—The Treatment of Typhlitis. (*Ibid.*, Jan. 1884, p. 138.)

2347. Yeo.—Empyema Communicating with the Lung. (*Lancet*, Feb. 1884, p. 331.)

2348. An Unusual Case of Tetanus. (*Med. Times and Gazette*, Nov. 1883, p. 603.)

2349. Wilks.—A Case of Acute Diabetes. (*Med. Times and Gazette*, Jan. 1884, p. 78.)

2350. Clutton.—Hydrophobia from the Bite of a Cat. (*Med. Times and Gazette*, Feb. 1884, p. 242.)

2351. Hammond.—On Migraine. (*New York Med. Jour.*, Nov. 17, 1883.)

2352. Arini, J. B.—A Case of Floating Liver. (*Anales del Cerculo Medico Argentino*, and *El Siglo Med.*, Jan. 20, 1884.)

2353. Mader.—Bronchial Gangrene from a Foreign Body. (*Wien. Med. Blätter*, Jan. 24 and 31.)

2354. Nothnagel.—Mucous Colic. (*Wien. Med. Blätter*, Dec. 6, 1883.)

2355. Habermann.—Œdema after Facial Erysipelas. (*Wiener Med. Blätter*, Dec. 1883.)

2356. Goix.—Subumbilical Acute Peritonitis. (*Gaz. des Hôpitaux*, Jan. 8.)

2357. Duroziez.—Acute Rheumatism. (*Comptes Rendus des Travaux de la Soc. Méd. de Paris*, 1882.)

2358. Comby.—Pulsating Empyema. (*Gaz. des Hôp.*, Jan. 8, 1884.)

2359. Gallard.—Miliary Aneurism of the Mucous Membrane of the Stomach. (*Gaz. Hebdom. de Méd.*, No. 7, 1884.)

2360. Brothier.—The Apyretic Form of Typhoid Fever. (*Jour. de Méd. et de Chir. Prat.*)

2361. Dérignac.—Gonorrhœal Arthritis and Endocarditis. (*Gaz. Méd. de Paris*, Feb.)

2362. Rivals.—Modifications of the Pulse-wave in Diseases of the Circulatory Apparatus. (*Revue Bibliograph.*, Jan. 1884.)

2363. Quinquaud. — Nervous Troubles caused by Small-pox. (*Revue de Thérap.*, Feb. 14, 1884.)

2364. Fernet.—Subacute Pleuro-peritoneal Tuberculosis.

2365. Brigidi and A. Bianchi.—Experimental Observations on the Contagiousness of Rabies. (*Lo Sperimentale*, Aug. 1883.)

2366. Botkin, Prof. S. P.—Clinical Lectures on Enteric Fever. (*Ejened. Klin. Gazeta*, Jan. 1, 1884, pp. 1–10.)

2367. Bogdanoff, L.—On a Case of Volvulus Cured by Effervescent Enemata. (*Vratch*, 1883, No. 26, pp. 411–12.)

2368. Lubimoff.—On the Tubercle-Bacillus. (*Vratch*, 1884, No. 2, p. 28.)

2369. Karst, S. M.—The Tubercle-Bacillus in the Sputa, and its Connection with the Course and Character of the Pulmonary Process. (*Vratch*, 1884, No. 4, p. 55.)

2370. Brandt, Professor E. K.—On Cohabitation of Bothriocephali Lati, and Tænia Solium in one Host. (*Russkaia Meditzina*, 1883, No. 1, pp. 14–15.)

Art. 2334. *Richardson on Morphia Habitués and their Treatment.*—Dr. B.W. Richardson, in the *Asclepiad* for January 1884, publishes his essay, read before the Medical Society of London, Dec. 10, 1883. The subject is confined to subcutaneous administration of morphia, and is considered under six heads: 1. the circumstances which commonly lead to the habit; 2. the time required to render the habit confirmed; 3. the degree to which the poisoning may be carried; 4. the phenomena produced. 5. the dangers incurred and the ultimate results; 6. the mode of cure of the habit. The author quotes various reasons which his patients have given him for commencing the habit, and adds that never in his experience has he met with the habit amongst total abstainers from alcohol. The time required to render the habit completely established is generally less than a month. Few confirmed habitués stop short at anything less than three grains in twenty-four hours; some go on to five or six. Usually with doses exceeding three grains, there are some sensations of exhaustion and of mental incompetency; but from ten to twelve grains is not out of the way in confirmed habitués. The phenomena produced and dangers incurred are innumerable. With reference to treatment, the author says, that in some cases, where the motive for commencing the habit is sound, and the dose taken not excessive, he has deemed it advisable only to regulate the administration of the drug. When, however, it is necessary to stop the drug, there are three ways in which it may be done: 1, by giving a substitute such as alcohol or chloral—a plan which the author strongly condemns; 2, by the gradual reduction of the dose, coupled with other modes of treatment of a general kind, such as carefully regulated diet, change of scene, tonics, &c.; 3, by the abrupt withdrawal of the morphia, and the actual restraint of the habitué until he has ceased to feel the effects of the loss, whatever his torments may be during the ordeal. The author regards this last method only possible in a very few cases, and recommends the gradual withdrawal of the drug, during a period of from seven to fourteen days.

2335. *Sharkey on the Treatment of the Habitual Abuse of Morphia.*—Dr. Sharkey, in the *Lancet*, Dec. 1883, p. 1120, records the case of a gentleman, aged 50, who for seventeen years had been in the habit of taking large hypodermic injections of morphia. He had sometimes taken 32 grains in the day. During the whole time he had done his work

as manager of a large manufactory in the City without any one detecting there was anything unusual the matter with him, until about a month before he came under the author's notice, when he began to break down. The patient consented to follow out any rules which might be laid down; he was removed to chambers, and not allowed to see any one except his two brothers. The drug was discontinued at once; for two or three days he was very restless, with constant vomiting and great prostration; the cutaneous surface was excessively sensitive, and he complained of constant sneezing, hiccough, with cramps in the abdomen. The treatment adopted consisted in doses of ammonia, bromide of ammonium, cannabis Indica, &c.; but the most effectual drug in producing quiet was the extract of belladonna, given as a suppository containing one grain, with a draught of a drachm of tincture of hyoscyamus. In four days the patient was taking food well, and the unpleasant symptoms were rapidly improving; within three weeks he went into the country, and then to Australia, whence he returned in good health.

2336. *Fowler on Subcutaneous Nodules occurring in an Adult not the Subject of Rheumatism.*—Dr. J. Kingston Fowler (*Brit. Med. Jour.*, January 1884, p. 107), at a meeting of the Clinical Society, read notes of a case of subcutaneous nodules occurring in a man aged 35, who had a history free from syphilis, gout, or rheumatism. Three years before the author saw him, a nodule commenced forming beneath the right patella; soon afterwards another appeared beneath the left patella, followed by others beneath the elbows. On examination by Dr. Fowler, the condition was as follows. On the posterior surface of the right ulna, three nodules were situated about two inches from the olecranon; one was as large as an olive, the others of the size of peas. On the left arm there were two nodules in like position, and of about the same size. Beneath the skin, which in the sitting position overlies the ischial tuberosities, there were on the right side six nodules, forming a single mass of the size of a Tangerine orange; a rather smaller nodule was present on the corresponding spot on the opposite side. Two inches below, and a little behind the right trochanter major, there were two collections of nodules forming a ridge about equal in size to a walnut; on the left side there were two smaller masses. Below each patella, there was a nodule of the size of a walnut. A small nodule was present below the internal condyle of the right femur, and another over the anterior surface of the right tibia.

2337. *Vaccinia and Variola.*—In the *Brit. Med. Jour.*, 1883, p. 1250, an article refers to the investigations of Dr. Voigt as to the origin and nature of cow-pox. In his most recently published report, he sums up the results of his observations under nine heads, of which the most important are the following. 1. It is possible to create vaccine by the inoculation of the calf with lymph from the pustules of human beings, the subjects of small-pox. 2. Vaccinia and variola are derived originally from the same contagium, and give to those affected by them an immunity one against the other. 3. After the lapse of twelve years, persons who have been attacked with small-pox show the same susceptibility to vaccination as those who have been vaccinated at an equally remote period; consequently, children of twelve years of age, vaccinated in infancy, present a moderately favourable soil for the poison of small-pox. 4. Animal lymph, originally very active, diminishes in efficacy, when transmitted from calf to calf, sooner than humanised lymph transmitted from arm to arm.

2338. *Clark on Catheter Fever.*—Sir Andrew Clark (*Brit. Med. Jour.*, Dec. 1883, p. 1221) delivered an address on catheter fever, before the Medical Society of London. The author gives a rough historical retrospect of fever following catheterism, which has received the various names of urethral fever, urethro-vesical fever, urinary fever, uræmic fever, catheter fever, &c. In a small percentage of these cases, no adequate structural cause of death has been found. It is of this variety of fever alone that the following propositions are made. 1. About middle life, in men seemingly perfectly healthy, the commencement of the habitual use of the catheter is sometimes followed by fever of the remittent type, which often ends in death. 2. It is important that such a fever should be well and widely known. 3. The knowledge of this fever has no adequate place in English surgical literature, or in the English surgical teaching of this time. 4. This fever is neither distinctly uræmic nor distinctly pyæmic; although having some of the characters of each, it has all the necessary characters of neither. Probably it begins in the nervous system. 5. A more complete knowledge of this variety of fever, and of the conditions of its origin, maintenance, and increase, may lead to a material diminution of its mortality. Two questions arise out of the study of the history of catheter fever; the first is, whether the fever may not be cut short by the administration, on entering upon habitual catheterism, of narcotic or anæsthetic remedies; the second is, what are the drugs to be employed on such occasions, seeing that quinine often fails signally; and what is the sort of hygienic management to be followed, especially in respect of food and alcohol. At p. 1237 a full report is given of the discussion after the paper, in which Sir H. Thompson, Sir J. Fayrer, Mr. Berkeley Hill, Mr. Savory, and others took part.

2339. *Atkin on Gangrenous Enteritis.*—Mr. Atkin, in the *Brit. Med. Jour.*, Feb. 1884, p. 320, reports a case of gangrenous enteritis occurring in a painter, aged 30. The case was thought to be one of colic, and was treated with enemata and purgatives; but, as no motion or flatus ever passed, he was admitted into the Sheffield Infirmary, where abdominal section was performed, and a loop of bowel was found to be gangrenous. As the man was moribund, nothing further was done. At the necropsy next day, no cause was found for the death of the intestine. Mr. Atkin came to the conclusion that it was probably due to the state of the arteries, a branch probably becoming thrombosed. [In the LONDON MEDICAL RECORD for 1883, p. 42, a case is reported by Dr. Weir, and similar cases to that of Mr. Atkin are noted as due to embolism of the superior mesenteric artery in sect. 1001 : 5 of the *Medical Digest.*—*Rep.*]

2340. *Ogston on the Theory of the Contagiousness of Pulmonary Consumption.*—Dr. F. Ogston, in the *Brit. Med. Jour.*, Feb. 1884, p. 219, relates the case of a man suffering from phthisis who was brought into his father's house, every member of which was perfectly healthy and free from any family history of consumption; this man infected a brother who slept with him, so that in a few months he died from phthisis. Two of his sisters were also engaged nursing him; they both died in a few months from phthisis, though previously they had been stout healthy girls. The patient had four remaining

brothers, who came little into contact with him; these all escaped. The facts of the case are in favour of the theory of the contagiousness of phthisis.

2341. *Sedgwick on Suppression of Urine in Perforation of Stomach from Gastric Ulcer.*—Mr. William Sedgwick, in the *Brit. Med. Jour.*, Feb. 1884, p. 313, points out that the suppression of urine, in cases of perforation of the stomach from gastric ulcer, in cases of choleraic collapse, strangulated hernia, perforations of duodenum or intestine, is not, strictly speaking, suppression, but arrest of organic function, in consequence of which not only is the bladder empty, but the kidneys have not been called upon to act. Reference is made to a case reported by Mr. Campbell (*Brit. Med. Jour.*, Feb. 2, 1884, p. 218), in which suppression of urine, in a case of perforation of the stomach, was attributed to the action of the opium, and the remark was made that an earlier discontinuance of morphia might have been advantageous when the suppression of urine was so great.

2342. *Allbutt on Alcoholic Leg-Pains.*—Dr. Clifford Allbutt, in the *Brit. Med. Jour.*, Feb. 1884, p. 397, writes that tibial pains are very characteristic of chronic alcoholism. These pains are commoner in women than in men, and occur also often about the ankles and feet. They are usually associated with marked cutaneous hyperæsthesia. Dr. Allbutt has diagnosed in women many a case of secret drinking by these pains alone, and has little doubt that the cause of them lies in an irritation of the spinal cord or its membranes.

2343. *Bell on Occlusion of both Ureters; Death by Syncope.*—Dr. Vincent Bell, in the *Lancet*, Dec. 1883, p. 1040, reports the case of a man, aged 49, who sent for him on Oct. 26, saying he had passed no urine since early the previous morning. The patient felt sure that a small calculus had become impacted in his right ureter two days previously, and one in the left ureter a few hours afterwards. The bladder was empty and collapsed. Aperients, diaphoretics, and warm baths were prescribed. On the 29th he was sweating freely, and his breath and skin emitted a distinctly urinous odour; he was almost free from pain. The same evening, his wife noticed that he twitched a good deal when asleep. The same treatment was continued until the 31st, when the patient flet as if he would soon be relieved, but died suddenly at 6 P.M. in the evening. At the *post mortem* examination a calculus was found impacted, about an inch above the bladder, in the right ureter, whilst in the left side there was a less firmly impacted calculus, which had not half an inch to travel, and which seemed as if it might have escaped into the bladder within another day.

2344. *Coughs.*—In the *Lancet*, Dec. 1883, p. 1054, an article appears, entitled 'Coughs,' which are defined as convulsive expiratory efforts intended to eject from the air-cells or passages of the lungs, or from the windpipe or larynx, either secretions or exudations, or occasionally foreign substances, which impede the act of respiration. Very grave mistakes are made in practice by treating cough as a pulmonary affection. In a large number of cases, its cause is extrapulmonary. Cough is always a nervously induced phenomenon, and as such ought to be treated with the utmost carefulness, so as to ascertain its cause, and the proportional relation which subsists between need and effort, and where need really exists.

2345. *Diver on a Remarkable Series of Cases of Scarlet Fever.*—Dr. Diver, in the *Lancet*, Jan. 1884, p. 110, records some remarkable facts in connection with an outbreak of scarlet fever in a school of about 250 children. One girl was first noticed with the rash, and was at once removed to the infirmary—a building in all ways isolated from the school. In ten days, another girl had scarlatina; she was removed at once. Three weeks passed with no fresh case, but on the twenty-fifth day another girl had to be removed to the infirmary; in another twenty days, another case appeared. In seventeen days more, three cases occurred together; in fifteen days, another; in twenty-eight days more, two more; in ten days, another two; and in twenty-three days more, the thirteenth girl, and the last of the series. The spread of the disease was supposed to be due to the girls drinking water from a cistern, the overflow-pipe of which was connected with the same drain into which the slops containing the night urine from the girl's dormitory were emptied.

2346. *Hall on the Treatment of Typhlitis.*—Dr. Hall, in the *Lancet*, Jan. 1884, p. 138, notices that in Quain's *Dictionary of Medicine*, under the heading of 'Treatment of Typhlitis,' it is advised to give calomel, colocynth, &c. Dr. Hall remarks that in one case of death from typhlitis he has met with, no cause could be conscientiously given but 'compound colocynth pill.' The whole treatment of typhlitis is summed up in one word, *rest*. This is to be obtained by abstaining from the use of all purgatives, and giving opium in the solid form. As regards food, the exclusive use of milk is a mistake, as it forms a very hard motion. Meat-juices, such as beef-tea, veal-broth, chicken-broth, &c., are to be preferred.

2347. *Yeo on Empyema Communicating with the Lung.*—Dr. Burney Yeo, in the *Lancet*, Feb. 1884, p. 331, reports the case of a man, aged 41, who, eight months previous to admission, was attacked with pneumonia of the left lung, and had never been well since. On examination, the case was diagnosed as empyema, the left side communicating with the lung. After watching the case for some time, the opinion of Sir Joseph Lister was sought, and it was agreed to operate at once. The patient was put under chloroform, and under the spray a crucial incision was made over the seventh left rib, in about the mid axillary line; the periosteum was separated and turned aside with the intercostal vessels, and about two inches of the rib were removed. A large drainage-tube was then introduced, and sixty ounces of pus were evacuated. The chest was rapidly enveloped in eucalyptus gauze, and the patient removed to bed. A fortnight after the operation he was walking about the ward, looking perfectly well and gaining weight rapidly, and left the hospital in six weeks quite well. Dr. Burney Yeo characterises the case as an example of one of the greatest triumphs of antiseptic treatment that can be witnessed.

2348. *An Unusual Case of Tetanus.*—In the *Med. Times and Gaz.*, November 1883, p. 603, an article appears on an inquest held at Guy's Hospital on the body of a boy aged 9, who died from tetanus two days after a fall from a ladder. No breach of surface could be detected anywhere, nor was there any evidence of the fall, beyond some pain on pressure about the neck. The *post mortem* examination failed to show any reason for the tetanus; and whether this were of idiopathic origin, or due to some traumatic cause, it is difficult to say. [In the *Lancet* of November 1879, p. 652, a somewhat similar case is reported by Mr. Leigh. A lad practising gymnastics

on a horizontal bar fell on his sacrum, and, after a few days' discomfort, was suddenly seized with tetanic symptoms, which ended fatally ten days after the fall. No definite *post mortem* changes were found. Vide *Medical Digest*, sect. 1324 : 2.—*Rep.*]

2349. *Wilks on a Case of Acute Diabetes.*—Dr. Wilks, in the *Med. Times and Gazette*, Jan. 1884, p. 78, reports a case of diabetes in a man, aged 23, which was supposed to come on acutely, as only a fortnight elapsed between the patient's first feeling of illness and his death. At the *post mortem* examination the left kidney was found much atrophied, the pelvis and ureter being completely blocked with a putty-like material. The right kidney had twice the normal size, and appeared quite healthy. No lesion was discovered in the brain or spinal cord. Dr. Wilks remarks that the symptoms which accompany death by diabetes are characterised by pain at the pit of the stomach, prostration, sighing, and apnœa, and that the term coma ought not to be used in these cases.

2350. *Clutton on a Case of Hydrophobia from a Cat-bite.*—Mr. Clutton, in the *Med. Times and Gazette*, Feb. 1884, p. 242, reports full notes of a case of hydrophobia in a woman, aged 43. The history is as follows. In January 1883 a mad dog bit two cats ; one ran away, but the other became mad and bit the patient in May 1883. Nothing was noticed until September, when the patient complained of pain in the right arm, shoulder, and neck. This became worse ; then difficulty of swallowing was experienced. Paroxysms of frenzy came on, so that chloroform was administered constantly, and, though every effort was made, death from exhaustion rapidly supervened. [Several fatal cases of hydrophobia, following bites and scratches of cats, are noted in sect. 520 : 4 of the *Medical Digest*, and in September 1883, p. 739, another case is reported in the *Brit. Med. Jour.—Rep.*]

2351. *Hammond on Migraine.*—Dr. Hammond, in the *New York Med. Jour*, Nov. 17, 1883, recognises two distant types of migraine. 1. The angiospastic, spasmodic, or sympathico-tonic form is due to vascular spasm, producing local encephalic anæmia. Whatever tends to diminish the flow of blood to the painful region, increases the intensity of the symptoms. The treatment consists in relaxing vascular spasm, and augmenting the volume of intracranial blood. To this end galvanism is of great service. A quarter of a grain of morphia hypodermically, followed by a drop of one per cent. solution of nitroglycerine every fifteen minutes, is also very beneficial. 2. The second type is the paralytic form, in which the arterial coats are relaxed. In this form galvanism is often very good. Cold to the nape of the neck, or compression of one carotid artery, is also useful ; but a large dose—a hundred grains—of sodic bromide rarely fails to cut short a paroxysm. Treatment during the intervals should consist of the bromides, ergot, and strychnine. RICHARD NEALE, M.D.

2352. *Arini on a Case of Floating Liver.*—Dr. J. B. Arini describes an interesting case of floating liver in the last number of the *Anales del Cerculo Medico Argentino*. The patient was a young married lady, in whom the abdominal muscles were weak and flaccid after childbearing. Wishing to put on a new dress which was found to be too tight, she, with the aid of another person, forcibly squeezed herself into it by lacing her stays extremely tightly. Thus compressed she started for church, but, before arriving there, was suddenly seized with an internal pain and sensation of tearing, which caused her to faint. Symptoms of peritonitis followed, obliging her to remain in bed for some time. On the subsidence of the peritonitis, a large swelling was noticed in the middle and right side of the abdomen. This tumour, which was movable, caused her great pain on walking, and she could only sleep on the right side. Dr. Arini first saw her eighteen months after the accident ; he then verified the presence of a tumour, presenting the character of the liver. The anterior surface was smooth and convex, and not painful to gentle pressure ; its lower border was sharp with a notch, its upper border thick and smooth ; the tumour was movable, and could be raised upwards and to the right under the false ribs ; the normal dull zone in the right hypochondriac had given place to a clear tympanitic sound. The periodical changes observed in the tumour coinciding with digestion, its movability, the subjective phenomena of weight and traction, and the physical signs, added to the history of sudden onset, recent confinement, and pendulous abdomen, all made the diagnosis clear. The treatment consisted in the employment of a species of support or corset, with a concave metal plate well padded, on which the thin border of the liver rested ; the organ by this means was held up more or less in its normal position. The patient found great relief from this support, and was able to walk and to lie on the left side without difficulty. G. D'ARCY ADAMS, M.D.

2353. *Mader on Bronchial Gangrene from a Foreign Body.*—The *Wien. Med. Blätter*, of Jan. 24 and 31 describes a case of bronchial gangrene occasioned by the inspiration of a small piece of bone. The patient was a strong man, aged 37, who came to Dr. Mader's clinic in Vienna on Dec. 20, 1883, with the history that on November 15, as he was eating some soup, he swallowed a piece of bone, which stuck in his throat. This caused so much dyspnœa, that he was obliged to spend the night sitting up in a chair. Next morning he saw a medical man, who used a bougie, and relieved him from the sensation of the presence of a foreign body. He rested from work for four or five days, but soon afterwards he was seized with rigors, pain in the right side, and severe cough, apparently from having caught cold in a cellar. On admission he had a certain amount of fever, and the respiration was hurried, but there was no sinking-in of the jugular regions. There was dulness on percussion over the right side, with some tenderness posteriorly, over the region of which no breath-sounds could be heard, the respiration elsewhere being vesicular. The sputa were not fœtid, but the patient remembered that the mucus he spat up three days after the accident had a bad smell. Fœtor appeared in the course of the three days following his admission, as the cough grew more severe, and the case went on, with increasing fever and fœtid expectoration, until Jan. 5, when it ended fatally, with symptoms of suffocation. At the necropsy, the lower division of the right bronchus was found completely stopped up by a piece of bone ; putrid bronchitis was found on both sides, and lobular pneumonia in the left lower lobe. A small solution of continuity was found on the posterior wall of the larynx, on a level with the arytenoid cartilage, showing that the piece of bone must have stuck there in the first place ; and a similar lesion at the bifurcation of the trachea pointed to a second stoppage of the foreign body,

before it slipped finally into the right bronchus, where it was found. The case contains a caution from a clinical point of view, as the use of the laryngoscope, indicated by the dyspnœa, might have shown the true nature of the case at the beginning.

2354. *Nothnagel on Mucous Colic.*—The *Wiener Med. Blätter* of Dec. 6 has an article by Professor Nothnagel on mucous colic, a disease characterised by the evacuation of casts of various forms and sizes, some branched, others single. These are found on examination to be masses of mucus, which have accumulated in the folds of the intestine, and have been pushed downwards. This condition, which Dr. Nothnagel calls croupous enteritis, occurs in nervous individuals, or in those suffering from constipation. Dr. Nothnagel also describes a peculiar form of clay-coloured stools, which he has observed, and which has also been mentioned by other writers. The stools are sometimes coloured, sometimes perfectly colourless; the condition occurs in various pathological states, and there is no common symptom to which the phenomenon can be referred. Dr. Nothnagel is disposed to agree with Bamberger, who wrote some years ago on the subject, expressing his belief that the cause is a temporary suspension of the expulsion of the bile, during which time it is probably stored up in the gall-bladder.

2355. *Habermann on Œdema after Facial Erysipelas.*—Dr. Habermann, of Prague (*Wiener Med. Blätter*, Dec. 18), has obtained excellent results from the employment of massage in the œdema of the face and nose resulting from erysipelas. The thickening of the nose and swelling of the upper lip, which are often so troublesome, have been entirely removed by a daily massage of a few minutes.

Alice Ker, M.D.

2356. *Goix on Subumbilical Acute Peritonitis.*—M. Goix says (*Gaz. des Hôpitaux*, Jan. 8) that the constitutional symptoms of this form of peritonitis are those of all acute inflammations of the peritoneum. The local symptoms consist of pain below the navel, meteorismus, and retention of urine; the movements of the diaphragm are not accompanied by pain. Subumbilical peritonitis might be mistaken for acute perityphlitis, but there is no tumour in the cæcal region; subperitoneal abscess differs by the adherence of the skin to the subjacent tissues.

2357. *Duroziez on Acute Rheumatism.*—The more recent views of the author on this subject are recorded in the *Comptes Rendus des Travaux de la Soc. Méd. de Paris*, 1882. He states that the heart is most often implicated in cases where the inflammation of the joints is slight. In pure mitral stenosis there are often no arthritic symptoms. Acute rheumatism of the abdomen and lower extremities is most frequent in adults, while in children the disease affects chiefly the upper half of the body. Acute rheumatism of the left scapulo-humeral articulation was remarkably often followed by cardiac complications.

2358. *Comby on Pulsating Empyema.*—In a paper reviewed by the *Gaz. des Hôp.* for Jan. 8, 1884, the author describes the symptoms of this rare affection, which can easily be mistaken for aneurism of the aorta. Pulsations, synchronous with the contractions of the heart, are visible on the left side of the chest; they are generally localised, but may extend to a large surface of the thoracic wall. In all the cases observed by Comby, the empyema had existed several years before the appearance of the pulsations and the left lung was indurated and fixed to the pericardium. The prognosis is very unfavourable.

2359. *Gallard on Miliary Aneurisms of the Mucous Membrane of the Stomach.*—The author reports (*Gaz. Hebdom. de Méd.*, No. 7, 1884) the case of a man, aged 48, who was admitted into the hospital in a state of extreme prostration, caused by repeated hæmorrhages from the stomach. There was anorexia, and pain in the epigastric region, but no local or general disease could be made out. The patient died after a few hours, and at the *post mortem* examination an aneurism of the size of a bean, situated near the cardia, was found to have given way. M. Gallard has observed two other cases of the same affection, and thinks that the so-called essential hæmatemesis is generally caused by the rupture of a small gastric aneurism.

2360. *Brothier on the Apyretic Form of Typhoid Fever.*—The author has collected in his dissertation (*Jour. de Méd. et de Chir. Prat.*, Art. 12,547) several observations, which show that in certain cases the characteristic lesions of typhoid fever may be found in patients whose temperature has always remained normal. In spite of the apparent mildness of the disease, hæmorrhages, perforation, and other complications are liable to occur. The symptoms are those of the ordinary form, with the exception that they are less marked, and that the temperature does not rise above the normal standard. It is very important to keep the patient in bed, and the diet must be carefully regulated.

2361. *Dérignac on Gonorrhœal Arthritis and Endocarditis.*—A well-marked case of this affection is reported in the *Gaz. Méd. de Paris* for Feb. 1884. The patient, a young man aged 25, had been suffering for three weeks from gonorrhœa. He had never had scarlet fever, rheumatism, chorea, or syphilis, and the members of his family were not subject to rheumatism. The first symptom was an acute pain in the left shoulder, accompanied by fever. The joint was swollen, and the arm could not be moved without much suffering. Auscultation of the heart gave a negative result, and salicylate of soda remained without effect. Three weeks later, there was a sudden rise of the temperature, and a very distinct systolic murmur could be heard at the apex. After a lapse of two months, the fever had disappeared, but the cardiac murmur remained the same, and there was some hypertrophy of the left ventricle.

2362. *Rivals on some Modifications of the Pulse-wave in Diseases of the Circulatory Apparatus.*—Under normal circumstances, a certain interval of time elapses between the systolic contraction of the heart and the expansion of the peripheral arteries by the pulse-wave. In various diseases of the circulatory apparatus, this interval is diminished or increased. The author has found (*Revue Bibliog.*, Jan. 1884) that it is diminished in atheroma, and still more in aortic regurgitation; it is increased in aortic obstruction, and sometimes in aortic regurgitation when complicated by secondary mitral regurgitation.

2363. *Quinquaud on some Nervous Troubles caused by Small-pox.*—According to the author (*Revue de Thérap.*, Feb. 14, 1884), small-pox is often accompanied by hallucinations and melancholia, which, however, generally disappear after a short time. Anæsthesia and hyperæsthesia, with or without motor paralysis, are not unfrequent after small-pox. Symptoms of ataxy are also sometimes

observed; they are generally preceded by some cerebral disturbance and accompanied by imperfect articulation and tremor. They last a long time, but have a tendency to disappear spontaneously. In one of these cases, the lesions of peripheral neuritis were found.

2364. *Fernet on Subacute Pleuro-peritoneal Tuberculosis.*—The author read a paper on this subject at the Société Médicale des Hôpitaux of Paris, February 8th. The chief characteristic of the affection is the simultaneous development of subacute tubercular lesions in the peritoneum and in both pleuræ. The peritonitis appears first, and the pleurisy seems to be caused by the migration of infectious agents through the lymphatic vessels. The symptoms are chiefly hectic fever, loss of flesh, diarrhœa or constipation, abdominal pain, and stitches in the chest. The abdomen becomes enlarged from accumulation of fluid or tympanites; effusion may take place into the pleural cavity, but the apices of the lungs remain healthy, for some time at least. The disease may end in recovery or death by perforation of the intestine, general acute tuberculosis, or tuberculosis of the lungs. The affections most likely to be mistaken for it are typhoid fever and cirrhosis of the liver. The general treatment recommended by M. Fernet consists in tonics, arsenic, and overfeeding.

J. S. Kaeser, M.D.

2365. *Brigidi and Bianchi on the Contagiousness of Rabies.*—The authors, after noticing the experiments of Pasteur and others, go on to relate their own. Three cases of hydrophobia in the human subject came under their observation. They made upwards of a dozen experiments to communicate the disease to the lower animals, mostly rabbits. The inoculations were performed with blood, fresh saliva, and brain-tissue beaten with water to a semi-fluid consistence. The micro-organisms cultivated in glycerine, and in no respect differing from those found in the blood, were also tried. In only one case did the inoculation give rise to hydrophobia, though in several instances the animals died of a quickly fatal septicæmia. In the successful case, some of the brain of a child that had died of the disease was reduced to a pultaceous consistence, and was inserted into the brain of a rabbit in the place where a small slice of the cortex had been removed to make room for it. The wound healed perfectly, and in a few days the animal appeared perfectly restored to its usual condition. On the thirty-second day from the operation, unusual restlessness and loathing of food were noticed. The following day there were convulsions, and death occurred. On examination, not the smallest trace of inflammation was to be found in the neighbourhood of the wound, which had healed thoroughly. The only thing abnormal that was discovered was an abundance of granular spherical micro-organisms, colourable with methyl-violet. These were found in the brain, in the spinal cord, and in the blood. Experiments with cultivated liquids gave purely negative results. The researches of the authors were intended to solve three problems: the communicability of the disease from man to the lower animals; the seat of the virus; and the element wherein the virus consisted. From the foregoing account it will be seen that the disease is not very readily communicated. As to the second and third questions, the authors regard the minute granular spherical organisms as the virus, though, in view of the negative results given by the cultivated organisms, they think that the point stands in need of demonstration. Amongst the places where these organisms are most plentiful, they especially note that the central canal of the spinal cord is always choked with a finely granular filamentous exudation, readily coloured with carmine, the vibratile epithelium lining the canal being swollen and turbid.

William R. Hugcard, M.D.

2366. *Botkin on the Course of Temperature in Enteric Fever.*—In an excellent clinical lecture, Prof. S. P. Botkin (*Ejened. Klin. Gazeta*, Jan. 1, 1884) states that the course of temperature in a vast majority of cases greatly differs from the well-known scheme given by Wunderlich. Only in 11 of 180 (that is, in 6·1 per cent.) of typical cases of typhoid the author and Dr. V. M. Borodulin (see Botkin's *Arkhiv Kliniky Vnutrennykh Bolezney*, 1881, Vol. vii., Part I., pp. 241-91) were able to find something approaching the general parabole-like appearance of the so-called 'Wunderlich's curve.' All the remaining cases presented strongly pronounced wave-like temperature-curves, with a widely varying character and number of the waves. In some cases, this apparent 'irregularity' of the course of temperature may be attributed to a modifying influence of other infectious diseases (relapsing fever, typhus), which attack the patient simultaneously with typhoid fever. But the author is far from being prepared to apply the same explanation to all cases indiscriminately. He points out to a certain parallelism existing between the wave-like or oscillatory course of temperature, and the leap-like course of anatomic changes in the intestines. It may be often observed in a case, that a temporary fall of the temperature coincides with an improvement in subjective signs and typhous state of the patient, with a decrease of the enlargement of parenchymatous organs, and so on; and on the contrary, when a new temperature-wave rises, all the symptoms again undergo an aggravation. The author thinks that these anatomical and temperature oscillations, being entirely independent one from the other, are the results of the action of a common cause. The waves or re-elevations of the temperature-curve may be regarded as manifestations of a kind of relapses or returns of the process. They are identical with similar phenomena observed in other infectious diseases (intermittent and relapsing fevers, small-pox, measles, scarlatina, and diphtheria). [An article on the course of temperature in the latter, by Drs. Kuvshinsky and Pastor, may be found in the London Medical Record, April 1883, p. 139.—*Rep.*]. All infectious diseases run their course 'by leaps.' The cause of this phenomenon is to be sought probably in the properties of pathogenic agents (whatever the latter may be), and especially in the (as yet unknown) physiological arrangements empowering the animal organism to struggle with invading disease. In one category of the infectious diseases, this struggle is short (paroxysms of intermittent); in another it is more prolonged (relapsing fever); in a third group, to which enteric fever belongs, the struggle is incomplete, and leads only to a temporary alleviation of the morbid process, which manifests itself, amongst other symptoms, in a passing decrease of temperature..

2367. *Bogdanoff on a Case of Volvulus Cured by Effervescent Injections.*—In the *Vratch*, 1883, No. 26, p. 411, Dr. L. Bogdanoff, of Rostov, Jaroslav Government, details, at considerable length, the case

of a jeweller, aged 18, in whom a complete intestinal obstruction of twelve days' standing (caused by the formation of a volvulus in the region of the ascendant colon) was successfully removed by effervescent injections, after all other means (laxatives, ordinary enemata; Hegar's injections of three litres of water; opium, carminativa, faradisation) had utterly failed to bring any relief whatever. The effervescent enemata were made as follows. The author took two teapots, each of which contained four pints of water, and dissolved in one of them half-an-ounce of bicarbonate of soda, and in the other two drachms of tartaric acid; then, through a Hegar's funnel, he poured out first the contents of the first teapot, and, immediately afterwards, the contents of the second. Within ten minutes the patient returned the injected fluid with an admixture of grain-like fæces. The injections were repeated during the next several days, being invariably followed by the discharge of larger fæcal lumps. A gradual full recovery was obtained. [Papers on effervescent injections may be found in the London Medical Record, 1883, October, p. 427 (Von Ziemssen), and February, p. 42 (Heustis).—*Rep.*]

2368. *Lubimoff on the Tubercle-Bacillus.*—Dr. Lubimoff, of Kazan, sums up (*Vratch*, 1884, No. 2) his observations as follows. 1. Repeated examination of the sputa of five healthy persons failed to detect any presence of Koch's rods. 2. The bacilli were absent also in the sputa of three patients with croupous pneumonia and of two with emphysema. 3. The sputa from six phthisical patients always contained greater or lesser numbers of the bacilli. 4. There seemingly exists no direct relation between the height of fever and the number of the rods. 5. The contents of caseous foci in the lungs of the patients who had died from tuberculosis always presented large numbers of the bacilli.

2369. *Karst on the Tubercle-Bacillus.*—In an introductory note in the *Vratch*, 1884, No. 4, p. 55, Dr. S. M. Karst, of Kalinkinsky Marine Hospital, in St. Petersburg, states the results of his observations on thirty-six phthisical patients and forty patients suffering from non-phthisical pulmonary affections (4 from croupous pneumonia, 4 from emphysema, 7 from acute bronchitis, 26 from chronic bronchitis, 3 from pleurisy, 2 from pleuro-pneumonia). The bacilli were found only in the phthisical cases. Their number in a microscopic field varied from one or two to several hundreds. They were always scanty in the purulent sputa. The author is inclined to explain this fact by Professor Metchnikoff's hypothesis, according to which leucocytes, in their capacity of 'phagocytes,' may devour bacteria. Metchnikoff's researches concerning phagocytes may be found in Claus' *Arb. aus dem Zoolog. Inst. zu Wien.*, Vol. v., Fasc. 2, p. 177. They were present in enormous numbers in the specimens taken from tubercular foci, cavities, and caseous masses. Their amount did not stand in any connection with the oscillations of the febrile temperature. It was otherwise as regards the rapidity of the course of the pulmonary process; in chronic cases the bacilli were but scanty, while in the rapidly running cases their number increased proportionately to the spreading of the local pneumonia. The length of the rods was different; some were short and some long. The longer rods were met chiefly in the chronic cases. The bacilli containing numerous spores were seen in the patients with a rapid phthisis, or in the last stage of the disease.

2370. *Brandt on Cohabitation of Bothriocephalus Latus and Tænia Solium.*—In the *Russkaia Meditzina*, 1883, No. 1, p. 14, Professor E. K. Brandt, of St. Petersburg, describes the case of a soldier's widow, aged 34, who complained of epigastric pain, constant weight in the belly, and general weakness, and from time to time passed 'grey and white bands.' Her food consisted chiefly of ham and fish. Two drachms of ethereal extract of male fern expelled from her two bothriocephali lati, 25 and 21 feet long, and one tænia solium, 8 feet in length. The author states that about 25 per cent. of pigs killed in St. Petersburg are infected with cysticercus celluiosæ. [A similar case of cohabitation of bothriocephalus and tænia was lately observed by the reporter.—*Rep.*]

V. Idelson, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

2371. Schulz.—Mercury in Diphtheria. (*Deutsche Med. Wochensch.*, Jan. 3.)

2372. Koszutski.—The Mercurial Treatment of Diphtheria. (*Wiener Med. Blätter*, Jan. 10.)

2373. Lustgarten.—A New Preparation of Mercury. (*Wiener Med. Blätter*, Jan. 10.)

2374. Debove.—Overfeeding in Marasmus and Phthisis. (*Deutsche Med. Wochensch.*, Jan. 3.)

2375. Horroch.—Bromoform as an Anæsthetic. (*Wiener Med. Blätter*, Jan. 17.)

2376. Von Puchy.—The Administration of Santonin. (*Wiener. Med. Blätter*, Jan. 24.)

2377. Fort.—The Action of Coffee. (*Deutsche Med. Wochensch.*, Dec. 5.)

2378. Aschenbrandt.—On Cocain. (*Deutsche Med. Wochensch.*, Dec. 12.)

2379. Koch.—Avena Sativa in Dipsomania. (*Med. Chir. Corresp. Blätter*, Sept. 1883.)

2380. Petrone.—The Action of Drugs on the Respiratory Mucous Membrane. (*Centralbl. für die Ges. Therap.*, Dec. 1883.)

2381. An Alleged Remedy for Hydrophobia. (*Centralbl. für die Ges. Therap.*, Dec. 1883.)

2382. Injection of Arsenic in Intermittent Fever. (*Centralbl. für die Ges. Therap.*, Feb. 1884.)

2383. Dupont.—Treatment of Diseases of the Heart by the Stigmata of Maize. (*Gaz. des Hôp.*, Feb. 1884.)

2384. Donath.—On Quinoleine. (*Conc. Méd.*, and *Revue de Thérap.*, Feb. 1884.)

2385. Broca and Wins.—The Treatment of Phthisis by Overfeeding. (*France Méd.*, Feb.)

2386. Testa.—The Treatment of Cardiac Disease by Iodoform. (*L'Union Méd.*, No. 36, 1884.)

2387. Stocquart.—The Internal Use of Chrysophanic Acid. (*Jour. de Méd. et de Chir. Prat.*)

2388. Morel-Lavallée.—Purpura caused by Inhalation of Chloroform. (*Ibid.*)

2389. Travignot.—The Treatment of Diabetes Mellitus by Phosphorus. (*Progrès Méd.*, No. 6, 1884.)

2390. Samoilovitch, Alexandra V.—On the Use of Large Doses of Carbolic Acid. (*Proceedings of the Caucasian Medical Society*, 1883, No. 11, pp. 338–55.)

2391. Shidlovsky.—Alumen Ustum in Intermittent Fever. (*Vratch*, 1883, No. 42, pp. 657–58.)

2392. Lvoff.—On the Use of Achillea Millefolium in Leucorrhœa. (*Vratch*, 1884, No. 2, p. 28.)

2393. Vargunin, A. V.—On Permanganate of Potash in Dysmenorrhœa. (*Vratch*, 1884, No. 3, pp. 37–38.)

2394. Tchalovsky, V. F.—Remarks on the Value of Vaccination. (*Meditz. Pribavl. k' Morsk. Sborn.*, January, pp. 45–49.)

2395. Suñer, Enriquez.—Arbutin. (*El Genio Medico-Quirurgico*, Feb. 7, 1884.)

2396. Campana.—Solution of Iodoform for Injection in cases of Acute or Chronic Blennorrhagia. (*Gazz. Med. Ital. Lomb.*, Jan. 19, 1884.)

2397. Gasparini, L.—The Water Cure in Diphtheria. (*Ibid.*, Feb. 16, 1884.)

2398. Valenzuela.—Helenin in the Treatment of Diseases of the Chest. (*El Siglo Medico*, Oct. 28, 1883.)

2399. Vachetta, Prof. A. A.—Clinical and Experimental Researches on Albuminate of Iron. (*Annali Univ. di Med.*, Jan. 1884.)

2400. Prince.—Iodoform in Chronic Cystitis. (*St. Louis Med. and Surg. Jour.*, Nov. 1883.)

2401. Smith.—Kairin. (*Brit. Med. Jour.*, Feb., p. 250.)

2402. Cullimore.—Alum in Whooping-Cough. (*Brit. Med. Jour.*, Feb. 1884, p. 219.)

2403. Dolan.—The Use of Sulphide of Calcium in the Treatment of Scabies. (*Brit. Med. Jour.*, Feb., p. 260.)

2404. Barlow.—Maniacal Delirium Treated by the Cold Douche. (*Lancet*, Jan. 1884, p. 9.)

2405. Forrest.—The Use of Ergot in Chorea. (*Lancet*, Jan. 1884, p. 191.)

2406. Illingworth.—The Salicylates in Diphtheria. (*Lancet*, Feb. 1884, p, 327.)

2407. Rattray.—Mackenzie's Emulsion of Cod-liver Oil. (*Ibid.*, Feb. 1884, p. 371.)

Art. 2371. *Schulz on Mercury in Diphtheria.*—At a meeting of the Congress of Physicians at Stralsund, on Dec. 2 (*Deutsche Med. Wochensch.*, Jan. 3), Professor Schulz, of Greifswald, spoke on the treatment of diphtheria, recommending mercury as a remedy. He mentions that in it we possess a remedy which has the power of influencing the affected tissue internally, and at the same time of destroying, or, at least, paralysing the poison. He recommends the cyanide, made up in a mixture of 1 centigramme to 120 grammes of water (one-seventh of a grain to 4 ounces), of which one to four drachms, according to age, may be taken every hour. The dose must always be small enough to cause no gastric disturbances. In the discussion which followed, this treatment was regarded with great suspicion, chiefly on account of the special danger of collapse in diphtheria; and a tonic regimen, with plenty of fresh air and local applications, was insisted on.

2372. *Koszutski on the Mercurial Treatment of Diphtheria.*—Dr. Koszutski, of Posen, has tried the mercurial treatment of diphtheria in his clinic, after the following manner (*Wiener Med. Blätter*, Jan. 10). He makes his patients gargle with a five to ten per cent. solution of chloride of sodium, which is injected by means of a syringe into the pharynx of children. This is partly for cleansing purposes, and partly in order that the mercury may subsequently act in the form of nascent sublimate. This it does when calomel is blown into the throat, where part of it unites with the salt to form sublimate, and part acts in the form of calomel. One to four decigrammes of calomel (1½ to 6 grains) is thus introduced. The diphtheritic membrane shrivels up and is ejected, sometimes within twenty-four hours, and a local return of the affection has not been observed.

2373. *Lustgarten on a New Preparation of Mercury.*—A new preparation of mercury was mentioned by Dr. Lustgarten at the meeting of the Royal and Imperial Society of Physicians in Vienna on Jan. 4 (*Wiener Med. Blätter*, Jan. 10)—namely, hydrargyrum tannicum oxydulatum. It contains 50 per cent. of mercury, is insoluble unless decomposed, and is not acted upon by weak hydrochloric acid, although it is changed by weak alkalies. The metallic mercury resulting from its decomposition occurs in remarkably small globules; and although it is doubtful whether the salt can be decomposed by the alkalies of the digestive tract, it is certain that mercury is taken up rapidly into the system, as it has been found after twenty-four hours in the urine. It is given in two or three doses during the day, to the amount of 1 decigramme (1½ grains), and is said to cause neither the constipation and other disagreeable effects of tannin, nor the general disturbances of mercury. Dr. Lustgarten hopes soon to be able to give more minute details of its action, after he has made more experiments with it.

2374. *Debove on Overfeeding in Marasmus and Phthisis.*—Debove, in the Hôpital de Bicêtre, has tried overfeeding in cases of marasmus and phthisis, with the best results (*Deutsche Med. Wochensch.*, Jan. 3). The patients are fed by means of the stomach-pump, or tube with a funnel, and receive daily about 3 litres of milk, and dried meat-powder, corresponding to 4 pounds of fresh meat. The powder is prepared from horse-flesh, for the sake of cheapness; and the patients improve remarkably under the treatment, œdema disappearing, and twenty pounds in weight being gained by one in forty days. In phthisis particularly the power of digesting food may be excellent, when no appetite, and even some disgust, is felt at eating in the usual way; and under the overfeeding treatment the proverb certainly comes true that 'L'appetit vient en mangeant.'

2375. *Horroch on Bromoform as an Anæsthetic.*—At the meeting of the Royal and Imperial Society of Physicians in Vienna, on Jan. 12 (*Wiener Med. Blätter*, Jan. 17), Dr. Horroch spoke of his experiments with bromoform as an anæsthetic. He began by making experiments on animals, and has since applied it to human beings. He finds the narcosis of bromoform to be very satisfactory, continuing for a long time, and causing no unpleasant after-effects; above all, no vomiting, its action on the stomach seeming to be much less than that of other anæsthetics. Its disadvantage is the irritation of the conjunctiva and the respiratory mucous membrane, which is felt also by the administrator; but Dr. Horroch hopes that some means of preventing this may be discovered.

2376. *Von Puchy on the Administration of Santonin.*—Dr. von Puchy, of Feldsberg, writes to the *Wiener Med. Blätter* of Jan. 24 on the best mode of administering santonin. Referring to the method suggested in the same journal (No. 12, 1883), he objects to giving it in oil inclosed in capsules, as being difficult to obtain fresh in country districts, and unsuitable for administration to children. He has given it in the form of pill, made up with castor-oil, soap, and powdered marshmallow root, and coated with a solution of 1 part of white pine resin, 10 parts each of balsam of Tolu and of spirits of wine, and 100 parts of ether. This compound remains unchanged by the juices of the stomach, but is dissolved by the alkaline and biliary secretions in the intestines, and so allows the drug to come into contact with the ascarides.

2377. *Fort on the Action of Coffee.*—The *Deutsche Med. Wochensch.* of Dec. 5 contains the report of some experiments on the action of coffee made by

Dr. Fort, of Rio de Janeiro, on himself. He took half a pound of the best coffee he could obtain in one litre of water in the course of the day, and found its effects to be stimulating, and irritating to the nerve-centres. His pulse increased from 72 to 114 before evening; as soon as he lay down in bed and tried to sleep, he was tormented by pains and cramps in all the muscles of the body, and by nausea, pain in the stomach, and gurgling in the intestines, and he did not fall asleep once during the whole night. On the following day, after the evacuation of eighteen thin watery stools, the symptoms improved somewhat, and only headache and loss of appetite remained. The irritation affected the entire nervous system, including the sympathetic; so that coffee is to be looked upon as a stimulant and not a food, although its moderate use is not prejudicial to health.

2378. *Aschenbrandt on Cocain.*—Dr. Aschenbrandt, of Würzburg, made some experiments during the last autumn manœuvres of the Bavarian soldiers on the action of muriate of cocain on the human organism (*Deutsche Med. Wochensch.*, Dec. 12). He administered the drug, unknown to the subjects, in doses of about one centigramme (one-seventh of a grain) in cases of exhaustion and fatigue from various causes, and found invariably that the lassitude was speedily removed, and that the men could go on for hours without feeling either hunger or thirst. One of his experiments was made on himself after a sleepless night, with the prospect of a long day's march before him, when a dose of cocain (taken in coffee about 3 A.M.) enabled him to go the whole day without feeling hunger, thirst, or fatigue, and he dined late in the afternoon with his usual appetite. He considers the drug to be a direct nerve-food, and not a stimulant merely; but its stimulating action is certainly far above that of alcohol, and it appears to have no injurious after-effects.

2379. *Koch on Avena Sativa in Dipsomania.*—Dr. Koch, of Rochester, New York, has tried tincture of avena sativa in the treatment of dipsomania, with good results (*Med. Chirurg. Correspondenz-Blätter*, Sept. 1883). The patient was a man aged 40, who had drunk for years, lately with furious eagerness, but who was now anxious to be helped to overcome the bad habit, which might practically be considered a disease. Five drops of the tincture administered three times a day succeeded in checking the desire for drink, and the man became capable of earning his living. Dr. Koch suggests that a small amount of morphia may have been present in the tincture, and have assisted the action.

2380. *Petrone on the Action of Drugs on the Respiratory Mucous Membrane.*—Dr. Petrone has made some experiments to prove the action of certain drugs on the respiratory mucous membrane (*Centralbl. für die Ges. Therap.*, Oct. 1883). He finds that alkalies injected into the blood of a cat to the extent of 2 grammes (31 grains) cause dryness of the mucous membrane, with anæmia, and the acquisition of a greyish tint; applied directly to the part, they cause increased secretion. From this it follows that they would be contra-indicated in catarrh, as a local application, except in so far as they might loosen the mucus and facilitate its expectoration. They would also be useful in dry catarrhs. Acetic acid, in the strength of 3 per cent., had the same effect as the alkali in causing an increased secretion, and should therefore be used in the same cases. Astringents, such as tannin, alum, and nitrate of silver, caused whiteness of the mucous membranes, probably from opacity of epithelium, and the secretion was completely arrested. Applied to the nostrils and pharynx, however, they caused hyperæmia and increase of the secretion. Turpentine vapour diminished and subsequently arrested the secretion, but, when applied in combination with water, it increased it. Apomorphin, pilocarpin, and emetin irritated the mucous membrane considerably, and pilocarpin caused the production of râles over the lungs. Morphia and atropine also dried up the mucous secretion, so that their favourable action seems to be in that manner, and not as anæsthetics.

2381. *An Alleged Remedy for Hydrophobia.*—The *Centralbl. für die Gesam. Therapie* of Dec. 1883 mentions a new remedy against hydrophobia, which has been known for some time in Tonquin, and which is now being employed in America and in France. The plant from which the drug is obtained, called hoang-nan by the Tonquinese, is the strychnos gautheria, belonging to the natural order Loganiaceæ. The proper course of treatment, after symptoms of hydrophobia have shown themselves, is to administer two or three pills in a spoonful of vinegar at once, and to follow this up by single pills at intervals of about fifteen minutes, until the hands and feet of the patient are spasmodically drawn up, and nervous twitchings, especially about the chin, begin to come on. Preventive treatment, as soon as a bite is known to have been inflicted, consists in the administration of one pill the first day, two the second, three the third, and so on until the physiological effects show themselves. The drug is also employed in the treatment of other poisonous bites, such as those of serpents, and in obstinate cases of skin-disease. Each pill contains $1\frac{1}{8}$th grain of the powdered cortex, combined with alum and realgar, and made up with mucilage.

2382. *Injection of Arsenic in Enlarged Spleen.*—The *Centralbl. für die Gesam. Therapie* of February 1884 contains the description of a new form of treatment for enlarged spleen as the result of malarial poison. This consists in the parenchymatous injection of Fowler's solution, a whole syringeful being injected at once, which was repeated in one case ten times in eight weeks. This has been tried, and is recommended by Dr. Peiper, of Greifswald, and it is said to act much more rapidly than when given by the mouth. The spleen must be firm in consistence, and must lie near to the abdominal walls, and the patient must have no tendency to hæmorrhagic diathesis or to leucocythæmic cachexia. An ice-bladder should be laid over the spleen for some hours before and after the injection.

Alice Ker, M.D.

2383. *Dupont on the Treatment of Diseases of the Heart by the Stigmata of Maize.*—The author gives in the *Gaz. des Hôp.* for Feb. 1884 the result of his researches on this mode of treatment. He has found that the extract, given at a dose of $1\frac{1}{2}$ to 3 grammes daily (in the form of Dufau's syrup, for example), increases the arterial tension and the quantity of urine, while it diminishes the frequency of the pulse. Generally speaking, the effects of the drug are the same as those of digitalis, though less rapid. One advantage is that it is tolerated by people who cannot take digitalis.

2384. *Donath on Quinoleine.*—The tartrate of quinoleine is soluble in water and has the taste of peppermint. Its physiological properties have been

studied by Dr. Donath (*Conc. Méd.*, and *Revue de Thérap.*, February 1884) who states that they resemble those of quinine in many respects. It lowers the temperature, prevents the coagulation of blood, and possesses remarkable antiseptic properties. Added to albuminoid substances in the proportion of 0·2 to 100, it prevents their decomposition and the development of micro-organisms. Given by the mouth, it acts like quinine, but without causing noises in the ears or giddiness.

2385. *Broca and Wins on the Treatment of Phthisis by Overfeeding.*—The authors believe with M. Debove that anorexia is one of the chief causes of exhaustion in phthisis, and that a systematic overfeeding (suralimentation) of consumptive patients by means of the stomach-tube exercises a most beneficial influence on the disease itself. Nitrogenous food is the best, especially milk, eggs, and meat-powder. The quantity introduced into the stomach at a time must never exceed one litre. The results of this mode of treatment are given by the authors in the *France Médicale* (February 1884). In most cases the food was well digested, the perspiration, cough, and dyspnœa diminished, and the patient increased in weight. In several cases the signs of excavations in the lungs became less distinct, though they never disappeared entirely.

2386. *Testa on the Treatment of Cardiac Disease by Iodoform.*—The author has proved experimentally that iodoform in a moderate dose increases the arterial tension and diminishes the frequency of the pulse. He was, therefore, led to follow Moleschott's example, and to try the drug in cases of non-compensated valvular lesions. His five observations, reported in the *Union Médicale* (No. 36, 1884), show that a dose of a fourth of a grain, given four to six times a day, diminishes the dyspnœa and œdema, and increases the quantity of urine; the beats of the heart become more regular, and the tendency to hæmoptysis disappears. It must not be forgotten that large doses of iodoform may cause acute fatty degeneration of the heart, liver, and kidneys.

2387. *Stocquart on the Internal Use of Chrysophanic Acid.*—The excellent results obtained by the external use of this drug in psoriasis have induced Messrs. Charteris, Napier, and others to try its influence when taken by the mouth. The author states (*Jour. de Méd. et de Chir. Prat.*, Art. 12,557) that he has given it in sixty-one cases of psoriasis, lichen, eczema, &c., and that in fifty-six cases the patients were cured. The ordinary daily dose is 3 centigrammes (half a grain), but it may be increased to 1 gramme (15½ grains), and even more, in some cases.

2388. *Morel-Lavallée on Purpura Caused by Inhalation of Chloroform.*—The author reports (*Jour. de Méd. et de Chir. Prat.*, Art. 12,551) three cases in which an abundant eruption of purpura rapidly developed in patients who had just begun to inhale chloroform. After two or three minutes the anterior surface of the thorax was covered with patches measuring 3 or 4 millimètres in diameter; some of them were rapidly transformed into bullæ filled with bloody fluid. These purpuric patches are probably caused by some reflex angiectasis, and seem to belong to the same class as the so-called nervous purpura which, according to Vidal and Fournier, has been seen to occur after a violent emotion.

2389. *Travignot on the Treatment of Diabetes Mellitus by Phosphorus.*—The author states (*Progrès Méd.*, No. 6, 1884) that he has tried phosphorus in several patients who had been treated previously by alkalies and diet with temporary benefit. Ordinary food was allowed, and under the influence of phosphorus alone the general health improved and the quantity of sugar in the urine diminished gradually. The drug can probably be taken for a long time without danger. The best preparation is oleum phosphoratum in capsules; one milligramme (one-sixtieth of a grain) of phosphorus can be given two to six times daily with the food. Dr. Travignot recommends also a combination of oleum phosphoratum and ferri carbonas made into pills with pulvis altheæ and oleum theobromæ.

J. S. KAESER, M.D.

2390. *Samoilovitch on Large Doses of Carbolic Acid in Puerperal Septicæmia and Enteric Fever.*—Dr. Alexandra V. Samoilovitch, of Tiflis, furnishes a detailed account (*Proceedings of the Caucasian Medical Society*, 1883, No. 11) of two interesting cases in which she made rectal injections of large doses of carbolic acid. One of her patients, a strongly built and well-nourished lady, 22 years of age, suffered from a severe form of puerperal septicæmia, with endo-, para-, and perimetritic foci; in addition to which, on the fourteenth day of the disease, there appeared erysipelas of the buttocks and external genitals, and, on the sixteenth, pleuro-pneumonia on the left side. By the twenty-first day, all medical attendants of the patient unanimously declared her state beyond any hope. In spite of the administration of quinine and subcutaneous injections of 2½ per cent. solution of carbolic acid (as recommended in puerperal fever by Dr. William Polk in the *Centralbl. für Gynœcologie*, 1883, No. 5), the temperature stood as high as 41°·3 C. (106°·16 F.), the pulse (160 a minute) was small, irregular, intermittent; respiration shallow, 40. The patient was cyanotic, and went from one fainting fit to another. It was under these extreme circumstances that the author tried, as her last means, an energetic administration of carbolic enemata. The latter were made of six grains of carbolic acid, a drachm of spirit, five drops of tincture of opium, and one and a half ounce of water. Three successive enemata (that is, eighteen grains of phenol) were administered in two hours' intervals. Five hours after the first injection the temperature fell from 41°·20 C. to 38°·7 C. (101°·6 F.). From this day an interrupted, though slow, recovery set in. The other case was that of a strong male patient, aged 31, affected with typhoid fever. The injections were made during the second week of the disease, and contained from 6 to 12 grains of carbolic acid. Twelve-grain enemata invariably produced profuse perspiration and reduced the temperature about 1½° C.; headache disappeared, and quiet sleep followed. In neither of the cases were any toxic symptoms present.

2391. *Shidlovsky on Alum in Intermittent Fever.*—After the perusal of an article by Dr. Brojendra Nath Banergee in the *Indian Medical Gazette*, Dr. K. T. Shidlovsky, of Tchistopol, Kazan Government (*Vratch*, 1883, No. 42), tried the administration of alumen ustum in several cases of quotidian intermittent, and came to the following conclusions. 1. Alum is the best substitute for quinine in intermittent fever of quotidian type. 2. When duly administered, alumen ustum rapidly cuts febrile paroxysms, especially in those cases where the periods of rigor, heat, and sweat are markedly pronounced. 3. To cure a case, two doses, of 8 grains

each (one three hours, the other one hour before an attack) are sufficient. It is advisable to repeat the treatment on the next day. In some cases, the attacks cease to occur after a single ten-grain dose of alum. 4. Alum must be given *per se* in powder, the patient immediately afterwards drinking a large quantity of water. Under this condition, there occur no gastric troubles whatever. [As a remedy for intermittent fever, alum has been much praised by Cullen, Boerhaave, Lindt, Monro, A. Müller, Fürstenau, Neuhold (*Oesterr. Zeitschr. f. Prakt. Heilk.*, 1862, p. 329). In Russia it is used in malaria by the peasantry (*Drug Zdravia*, 1837, p. 108).—*Rep.*]

2392. *Lvoff on the Use of Achillea Millefolium in Leucorrhœa.*—Dr. Lvoff (*Vratch*, 1884, No. 2, p. 28) says that Achillea millefolium (of fam. *Compositæ*, trib. *Senecionideæ*), an old popular remedy, displays a decidedly beneficial action in cases of simple (non-gonorrhœal) whites in children and adult women. His statement is based on the administration of the plant to thirty-four patients, twenty of them being aged from 7 to 15, seven from 15 to 20, and seven from 20 to 30. An infusion of summits or flowers was used. In an editorial note, Professor V. A. Manassëin states that, according to Annenkoff, the leaves and flowers of millefolium possess tonic and stimulating properties, and are used in atony of the digestive organs, in cases of hæmorrhoidal and uterine hæmorrhage, in dysmenorrhœa, mucous whites, chlorosis, &c. Ronzier-Joly praised the remedy as an emmenagogue (10 grammes to 500 of boiling water). Chomel and Hufeland gave it as an antispasmodic and in amenorrhœa (20, 30 to 1000). Zanoni prepared from millefolium a bitter alkaloid-like principle, achilleine, which was later studied by Planta, and was recommended as a remedy for intermittent fever by Puppi.

2393. *Vargunin on Permanganate of Potash in Dysmenorrhœa.*—The successful results obtained by Drs. Sydney Ringer and W. Murrell from manganese in cases of amenorrhœa, as well as Dr. Lvoff's confirmatory statements (see the London Medical Record, March 1884, page 116), led Dr. A. V. Vargunin (*Vratch*, No. 3, 1884) to try the remedy in a delicate weak girl, aged 26, who had for four years suffered from obstinate dysmenorrhœa, in spite of the successive use of iron, arsenic, bromide of potassium, tincture of Indian hemp, and other narcotics, all of which produced no beneficial influence whatever. The patient was ordered pills containing permanganate of potash and extract of pulsatilla, a grain of each, to take for fourteen days immediately preceding the expected period (namely, for first five days one pill three times a day, and in the next days, two pills thrice daily). The flow came in due term, unaccompanied by pain. The resumption of the administration of manganese in the next month was similarly successful.

2394. *Tchalovsky on the Application of Iodoform in Small-pox.*—In the *Meditz. Pribavl. k Morsk. Sborniku*, January 1884, p. 47, Dr. V. F. Tchalovsky, physician on board the *Kostroma*, records his experience in the use of iodoform as a means to prevent, or at least to mitigate, the formation of unseemly pits from small-pox. During his voyage from Odessa to Vladivostok, he happened to observe thirteen cases of small-pox, in five of which iodoform powder was applied in the stage of suppuration. The results were very striking in all five cases. The marks were either entirely absent, or but very slight; while in the remaining eight patients left without iodoform treatment they were deep and extensive. The difference was especially pronounced in two cases, in which the author intentionally used iodoform on one side of the body only, leaving the other alone. V. Idelson, M.D.

2395. *Suñer on Arbutin.*—Dr. E. Suñer gives three cases in which he obtained excellent results from arbutin (*El Genio Medico-Quirurgico*, Feb. 7, 1884). The first case was that of a lady who for three years had been suffering from catarrhal cystitis. She had constant lancinating pains in the hypogastrium, with frequent and painful micturition; her urine was scanty, and had a characteristic mucous sediment. She suffered from frequent exacerbations, and at last was obliged to keep her bed. Two grammes (31 grains) of arbutin daily for fifteen days were given with great improvement of the symptoms: the pains disappeared, micturition was easy, the urine abundant, clear, with very little sediment, and the general state greatly improved. The other two cases were of acute blennorrhagia. Two grammes of arbutin were given daily. The pains on micturition and afterwards ceased immediately, the urine became clear and abundant, the discharge gradually diminished, and in fifteen days from the commencement of the attack had almost disappeared, an astringent injection quickly arresting it altogether. In neither of these two cases was there consecutive epididymitis.

2396. *Campana on Solution of Iodoform for Injection in Cases of Acute or Chronic Blennorrhagia.*—Campana gives the following formula: ℞ Iodoform, 20 grammes; carbolic acid, 0·10 to 0·20 gramme; glycerine, 80 grammes; distilled water, 20 grammes. At first one injection only is to be used in the twenty-four hours; after three or four days, two injections daily. After about ten days, when the inflammatory symptoms have subsided, sulphate of zinc in mucilage and water is to be substituted for iodoform.

2397. *Gasparini on the Water-Cure in Diphtheria.* Dr. Gasparini (*Gazz. Med. Ital. Lomb.*, Feb. 16, 1884) accepts Morell Mackenzie's definition of diphtheria, and looks upon it as an acute infectious general disease with a tendency to the production of certain local manifestations. His treatment consists in wrapping the patient in a cold wet sheet, repeating the packing three or four times a day, according to the height of the fever. Cold compresses are to be kept continually to the throat. He also uses gargles of the alkaline sulphites, carbolic acid, &c., as disinfectants, never caustics. In 1875 six cases were thus treated; all recovered, the disease lasting from five to eleven days. In 1879 seven cases recovered under the same treatment, the average duration of the disease being ten days. This treatment is well borne, and the patients like it; its antipyretic action is marked, though transitory. Stimulants are at the same time to be freely administered. The duration of the disease is not influenced, but convalescence is shortened and the strength is more quickly recovered.

2398. *Valenzuela on Helenin in the Treatment of Diseases of the Chest.*—Helenin is the volatile oil which is obtained from the root of the *Inula Campana*. It crystallises in four-sided prisms, insoluble in water, but soluble in ether and alcohol; it has a yellow colour; melts at 72°, and boils at 140° C. (284° F.); its formula is $C^{21}H^{28}O^{3}$. Helenin has been extensively employed in the general hospital of Madrid in the treatment of tuberculosis, chronic bronchopneumonia, and whooping-cough. According to the

author, considerable benefit has been obtained in early phthisis, and striking results in chronic bronchitis, and especially in whooping-cough. In all cases, helenin diminished the attacks of cough, and relieved the dyspnœa and pains of the chest, without causing any symptoms of narcotism. The expectoration diminishes and becomes almost gelatinous. It also has a decided tonic action in the digestive organs, and improves markedly the appetite in phthisis.

2399. *Vachetta on Albuminate of Iron.*—Prof. Vachetta (*Annali Univ. di Med.*, Jan. 1884) recommends albuminate of iron very highly; it is very soluble, of constant composition, not unpleasant taste, and easily absorbed. Administered internally, in doses of 25 to 100 centigrammes in the day, it is very valuable in anæmia, and gives rise to no disturbance of digestion. In solution, 1 part in 10 or 20 of water, it may be used hypodermically. The solution must be made with cold water, but may be heated to 37° or 38° C. before using. Administered in this way, it is very useful in grave cases of anæmia. It may be injected into the peritoneal cavity, and gives rise to no pain; 10 cubic centimetres may be injected at a time. No symptoms of peritonitis result if proper antiseptic precautions be taken. Vachetta prefers intraperitoneal injection of albuminate of iron to intraperitoneal injection of defibrinated blood; its employment is less dangerous, and the *modus operandi* is more simple, and its advantages equal, if they do not surpass, those of the injection of homogeneous blood. He does not consider the injection of a large quantity of the solution of albuminate of iron of any use in acute anæmia (from hæmorrhage), though he has only made one experiment in this direction. In acute anæmia, the injection of albuminate of iron into the veins may be of some advantage. Great care must be taken to obviate gaseous embolism; the operation must be aseptic, the liquid filtered through a thick cloth, and the injection made slowly in small quantities, the solution being heated above 35° C. Besides the mechanical stimulus to the heart of the warm solution, the analogy of composition of the ferric albuminate solution to the blood indicates that it must have a nutrient effect. There is no possible danger of the formation of coagula or emboli from the action of the remedy. The albuminate of iron, if injected into the connective tissue, or, better, into the peritoneum, causes a rapid increase of the hæmoglobin of the blood, and actively excites the hæmopoietic organs.

G. D'ARCY ADAMS, M.D.

2400. *Prince on Iodoform in Chronic Cystitis.*—Dr. Prince, in the *St. Louis Med. and Surg. Jour.*, Nov. 1883, records his results in the treatment of cystitis by iodoform. A drachm and a quarter of iodoform was ground down with a drachm and a half of starch, and mixed with eight ounces of water. Three ounces of this were used for an injection in chronic cases of cystitis, and they readily yielded to the treatment.

2401. *Smith on Kairin.*—Dr. Heywood Smith, in the *Brit. Med. Jour.*, Feb. 1884, p. 250, writes that he has tried kairin in several cases with the best possible results. In one case, after the removal of a dermoid cyst of the ovary, in twenty-six hours the temperature was 104°·2, pulse 120. Three grains of kairin were given every hour, and the temperature and pulse came down steadily.

2402. *Cullimore on Alum in Whooping-Cough.*—Dr. Cullimore, in the *Brit. Med. Jour.*, Feb. 1884, p. 219, writes that alum is a very old and efficient remedy in whooping-cough. It may be given immediately after the cessation of the catarrhal stage, for which small doses of aconite answer best. It may be given as follows. ℞ Aluminis sulph. gr. ij.; tincturæ belladonnæ ℥iij. ad v.; tincturæ cinchonæ xij.; syrupi aurantii ʒss.; aquam ad ʒij.; three or four times a day for a child of four years. Sometimes, however, in whooping-cough there is a hacking spasmodic cough, preventing sleep, which no drug seems to relieve. Here, one or two teaspoonfuls of brandy, or less according to age, with a double or fourth part of hot water and very little sugar, answer remarkably well. [Vide *Medical Digest*, sect. 716 : 5.—*Rep.*]

2403. *Dolan on the Use of Sulphide of Calcium in the Treatment of Scabies.*—Dr. T. M. Dolan, in the *Brit. Med. Jour.*, Feb. 1884, p. 260, advocates the use of sulphide of calcium in the treatment of scabies. The preparation used is in a liquid form, and made in the following manner: Flower of sulphur, 100 parts; quicklime, 200 parts; water, 1,000 parts. Boil the whole for some time, stirring occasionally until the substance become incorporated, allow the liquid to cool, and decant into hermetically sealed bottles. The method of application is as follows. The patient is first put into a warm bath; he then is painted with a brush dipped in the solution, and placed in bed, either in blankets or in a flannel nightgown made for the purpose. After a short time, owing to the deposit of the sulphur, the patient's body is almost of the colour of a guinea. The beneficial effects are speedily manifested; the itching ceases, and, as a rule in simple cases, after another warm bath, the patient is cured. [The value of this preparation has been strongly advocated for many years (*vide* sect. 34 : 5 of the *Medical Digest*); yet, while many believe that in sulphur and its compounds we have a specific for scabies, Dr. McCall Anderson (*Lancet*, Vol. i., 1870, p. 150) considers the drug among the worst remedies we have at our command.—*Rep.*]

2404. *Barlow on Maniacal Delirium treated by the Cold Douche.*—Dr. T. Barlow, in the *Lancet*, January 1884, p. 9, records the case of a man, aged about 30, apparently suffering from a severe attack of delirium tremens. The skin was dry, hot, and pungent to the touch. He was very violent if anyone touched him. Dr. Barlow decided to try Dr. Broadbent's plan of employing the cold douche. The bed and bedclothes were removed, and a large mackintosh coat was spread over the mattress. The patient was then stripped, and a spongeful of cold water squeezed down his neck and back, and then freely splashed over his face and chest. It quieted him immediately. He was then vigorously rubbed and dried, and some strong broth was given to him, which he thoroughly enjoyed. During the rubbing process he gave one short loose cough. After four hours' sleep the douche was again applied, and the patient lay down quietly, having no more delirium. A slight attack of pneumonia followed, Dr. Barlow believing that this was the true cause of the delirium, and that it assumed the form of delirium tremens, owing to the previous intemperate habits of the patient. The author points out that Dr. Broadbent has reported a few cases of treatment by the cold douche (*Brit. Med. Jour.*, May 1883, p. 460), and some are mentioned in Neale's *Digest*

(sects. 430 : 5, 1388 : 3); but the number is too few to prove that opiates have no place in the treatment of maniacal delirium.

2405. *Forrest on the Use of Ergot in Chorea.*—Mr. Forrest, in the *Lancet*, January 1884, p. 191, writes to say that, assuming the correctness of Dr. Dickinson's observations on the state of dilatation of the smaller vessels of the brain and spinal cord in many cases of chorea, it occurred to him to administer ergot, beginning with five minims of the liquid extract thrice daily. Mr. Forrest tried it on a boy, aged 7, a very severe case indeed, and was rewarded with marked success in the course of two or three weeks. A drop of arsenical solution was added to improve the tone of the motor and sensory nerves.

2406. *Illingworth on the Salicylates in Diphtheria.*—Dr. Illingworth, in the *Lancet*, Feb. 1884, p. 327, writes proposing the use of salicylate of soda in cases of diphtheria. Some time ago the author advocated the use of five to ten-grain doses of the salicylate of soda every two hours in cases of pneumonia, on the theory that the drug prevents the formation of fibrin, and in this manner it is no more a specific for rheumatic fever than for pneumonia or diphtheria. In children, an acute congestion of the lungs is very rapidly thrown off with three-grain doses of the salicylate and a little ammonia every two hours. The use of the drug in diphtheria is worth a trial, but in cases of false or congestive croup, astringents such as steel and sulphuric acid are recommended. [A reference to sections 821 : 4, 822 : 5, and 823 : 5, of the *Medical Digest* will show that the salicylates have for several years enjoyed a reputation in the treatment of diphtheria.—*Rep.*]

2407. *Rattray on Mackenzie's Emulsion of Cod-liver Oil.*—Mr. Rattray, in the *Lancet*, Feb. 1884, p. 371, gives the following formula for the preparation of Mackenzie's emulsion. ℞ Olei morrhuæ, ℥xxxij.; gummi tragacanthæ ʒss.; sacchari albi ʒiv.; aquæ, ℥xxxij.; ol. cassiæ q.s.; calcis hypophosphitis ʒvj. gr.xxiv.; pepsinæ ʒv. gr.xx. The tragacanth and sugar with the pepsine are to be mixed with the water in which the hypophosphite of lime has previously been dissolved. In this has to be incorporated the cod-liver oil; and, after thorough mixture, the oil of cassia is added.

Richard Neale, M.D.

OBSTETRICS AND GYNÆCOLOGY

RECENT PAPERS.

2408. Rodzewicz, H. J.—On the Appearance of the First Menstruation in 44,056 Women in European Russia. (*Vracheb. Vedomosty*, No. 593, 1883, pp. 4,386–89.)

2409. Ananoff, S. O.—A Case of Congenital Absence of the Uterus. (*Proceedings of the Caucasian Medical Society*, No. 13, 1883, pp. 406–09.)

2410. Oudiné.—Spinal Congestion caused by Suppressio Mensium. (*Jour. de Méd. et de Chir. Prat.*)

2411. Macdonald.—Resection of Several Inches of Small Intestine in the course of Abdominal Section for Removal of an Extra-uterine Fœtus. (*Lancet*, Feb. 1884, p. 249.)

2412. Wilks.—Amenorrhœa and Vicarious Menstruation.—(*Med. Times and Gazette*, Feb. 1884, p. 179.)

2413. Fraser.—Menstrual Discharge in a Woman 70 Years Old. (*Brit. Med. Jour.*, Feb. 1884, p. 398.)

2414. Delgado, Alba.—A Remarkable Case of False Pregnancy. (*La Clinica*, and *Revista de Ciencias Medicas*, Jan. 10, 1884.)

Art. 2408. *Rodzewicz on the first Appearance of Menstruation in Women of European Russia.*—Dr. H. J. Rodzewicz, of Nijni-Novgorod, has collected (*Vracheb. Vedom.*, No. 593, 1883) the data referring to 44,056 women of various (chiefly central) districts of European Russia. He found that the first menstruation made its appearance in one woman in the 8th year; in 38 women in the 10th; in 187 in the 11th; in 780 in the 12th; in 2,554 in the 13th; in 6,106 in the 14th; in 8,558 in the 15th; in 9,616 in the 16th; in 8,059 in the 17th; in 4,530 in the 18th; in 2,301 in the 19th; in 914 in the 20th; in 238 in the 21st; in 86 in the 22nd; in 41 in the 23rd; in 12 in the 24th; in 20 in the 25th; in 4 in the 26th; in 8 in the 27th; in 1 in the 31st; in 1 in the 36th; and in 1 in the 43rd year. On the average, the first menstruation began at the age of 15 years 11 months and 8 days. Recently Drs. K. R. Heinrichsen, P. A. Rakusa, and M. J. Razumovsky supplied the author with the data referring to 5,180 women of Odessa, in whom the beginning of catamenia occurred, on the average, at the age of 14 years 11 months and eight days. [Considering that it may, perchance, prove of use for those of our readers who take interest in the anthropological study of menstruation, we adduce the following (rather scanty) list of the authors treating the subject in reference to Russian women. 1. Prof. Kitter, *Handbook of Gynæcology*, 1858, p. 553 (on St. Petersburg women). 2. Liven, P., in the *Proceedings of the Paris International Medical Congress*, 1867, p. 205 (St. Petersburg). 3. Prof. Horwitz, in the *Voenno-Meditz. Jurnal*, Oct. 1868; in his *Clinical Lectures on Gynæcology*, 1871, and *Handbook of Pathology and Therapeutics of Female Sexual Sphere*, 1878 (St. Petersburg). 4. Prof. J. Tarnovsky, in his annotations to Schroeder's *Handbook*, 1876 (St. Petersburg). 5. P. Enko, in the *Proceedings of the St. Petersburg Russian Med. Soc.*, 1877–78, p. 137 (St. Petersburg women). 6. H. J. Rodzewicz, in the *Vracheb. Vedom.*, 1880, Nos. 406, 408, and 409 (on Nijni-Novgorod women); 1881, Nos. 783–87 (on St. Petersburg women), and No. 495; 1882, Nos. 530–32 (on women of Kazan, Astrakhan, Samara, Saratov, &c.); 1883, No. 566; in the *Zdorovie*, Sept. 1882, p. 194. 7. Jastreboff, N., in the *Zdorovie*, 1878, Nos. 33 and following (on North Russian women). 8. V. Smidovitch, in the *Sbornik. Sotchin. po Sudeb. Meditz.*, 1877, Vol. ii., p. 72 (on Tula women). 9. Prof. K. F. Slaviansky, in the *Zdorovie*, No. 10, 1875 (on Riazan peasant women). 10. Mrs. S. Krapivina, *Zdorovie*, No. 57, 1877 (on St. Petersburg women). 11. O. Otto, *Zdorovie*, 1879, p. 280 (on Kaluga women). 12. V. Surovtzeff, *Zdorovie*, July 1882, p. 7 (on Arkhangelsk women). 13. S. M. Vasilieff, *ibid.*, Oct. 1881, p. 313 (on St. Petersburg women). 14. Heinricius, in the *Centralbl. für die Gynæc.*, No. 1, 1883 (on women of Finland). 15. N. T. Grigorieff, in the *Vracheb. Vedom.*, Nos. 573–75, 1883 (on Jaroslav peasant women). 16. Bensenger, in the London Medical Record, Dec. 1880, p. 495.—*Rep.*]

2409. *Ananoff on a Case of Absence of the Uterus.*—Dr. S. O. Ananoff, of Tiflis, records (*Proceedings of the Caucasian Medical Society*, No. 13, 1883) the case of a girl, aged 20, of diminutive size and moderate build, who sought his advice on account of cardialgia. The patient had never menstruated. The breasts were underdeveloped; the pubes was void of fat and covered with very scanty hair; the labia had the appearance of small, thin, flat folds; the clitoris 'had the size of a poppycorn.'

The hymen was normal, of a circular variety. The vagina measured 5½ centimetres in length, and formed a blind pouch without any traces of the intravaginal portion of the womb. Combined examination after Kiwisch's method (by a finger in the rectum, and a catheter in the bladder) showed a complete absence of the uterus. The author's diagnosis was afterwards confirmed by Drs. V. E. Krusenstern and Babanasiantz. Dr. V. E. Krusenstern also saw a case of absence of the uterus in a Georgian girl, aged 17, who applied to him with complaints of amenorrhœa and hypogastric pain. The vagina formed a short blind pouch; through the rectum a small lump of the size of a walnut was felt in the situation of the uterus. Dr. Tatiana N. Potapova came across a case of absence of the uterus in Professor Tarnovsky's clinic; the external genitals were fully developed, and the general appearance of her patient presented nothing abnormal. [A dozen cases of absence of the uterus extracted from the Russian literature of last years may be found in the London Medical Record June, p. 241, and November, 1883, p. 480.—*Rep.*]

V. Idelson, M.D.

2410. *Oudiné on Spinal Congestion Caused by Suppressio Mensium.*—The relation between anomalies of the menstruation and some forms of paraplegia seems to be confirmed by the observations of the author, who states (*Jour. de Méd. et de Chir. Prat.*, Art. 12,550) that in certain cases a sudden arrest of the menstrual flow is immediately followed by paresis of the lower extremities. There may be also pain and tingling in the legs, and pain in the spinal region. The sphincters remain unaffected, and all the symptoms generally disappear after a short time. In older women, at the period of the menopause, similar nervous troubles have occasionally been observed, but they are then apt to last longer, and the prognosis is much less favourable.

J. S. Kaeser, M.D.

2411. *Macdonald on Resection of Several Inches of Small Intestine in the course of Abdominal Section for Removal of an Extra-uterine Fœtus.*—Dr. Macdonald, in the *Lancet*, Feb. 1884, p. 249, reports the case of a woman, aged 28, who suffered from peritonitis and extra-uterine fœtation. On opening the abdomen, a piece of intestine was injured, and about six inches was found so hopelessly diseased that it was removed, the edges of the free ends being brought together with a continuous catgut suture. The patient made a slow but perfect recovery.

2412. *Wilks on Amenorrhœa and Vicarious Menstruation.*—Dr. Samuel Wilks, in the *Med. Times and Gazette*, Feb. 1884, p. 179, publishes his opinions on amenorrhœa and vicarious menstruation, and states that he regards such menstruation as an absurdity. The first cause of hæmoptysis and hæmatemesis, a young student will say, is vicarious menstruation; the conditions of ulcer or cirrhosis are quite overlooked by them. The reason for this is clear; their memory is impressed by the very strangeness and oddity of the disorder, and so it comes first to the front. The object of Dr. Wilks's paper is to induce young practitioners to disbelieve the notion of vicarious menstruation, until they see a case for themselves in which no other cause can be assigned for the hæmorrhage. As regards amenorrhœa, the author says he knows nothing of such a disorder, nor of such remedies as emmenagogues; he regards it as the remnant of a popular delusion, and if so it should be eradicated, like the other disorder, from the medical mind.

2413. *Fraser on Quasi-menstrual Discharge in a Woman Seventy Years Old.*—Mr. Fraser, in the *Brit. Med. Jour.*, Feb. 1884, p. 398, reports that he is attending a woman over seventy years of age, who is suffering from Bright's disease. About two months ago she had pains in her back and the lower part of the body, followed the next day by a discharge of blood from the uterus, lasting four or five days, and resembling in every way her former menstrual periods. An interval of more than twenty years has elapsed since the menopause.

Richard Neale, M.D.

2414. *Delgado on a Remarkable Case of False Pregnancy.*—A woman, aged 30, married, separated accidentally from her husband for several months, presented herself in the hospital at Valladolid for advice, saying that she was pregnant and out of her reckoning. The greater part of the signs of pregnancy existed—suppression of the menses for about nine months, gradual enlargement of the abdomen to full-term size, increase of the breasts with pigmentation of the nipples, vomiting at the beginning and end of the pregnancy. She said she felt the movement of the child. On examination, ballotement, movements of the fœtus, and fœtal heart-sounds were absent. After four days in the hospital, labour-pains began, terminating by the expulsion of a great quantity of blood in dark clots and liquid by the vagina. At the same] time there was violent hæmatemesis, which had to be controlled with ice and perchloride of iron. Three years later, when she had again been living with her husband for eleven months, the same series of phenomena occurred; the hæmatemesis, however, being less intense. On the most careful examination, no trace of mole, or of remains of placenta or fœtal membranes, could be discovered.

G. D'Arcy Adams, M.D.

PATHOLOGY.

RECENT PAPERS.

2415. Freire, Dr. Domingo.—Hotbeds of Yellow Fever. (*El Siglo Medico*, Dec. 9, 1883.)

2416. Petrone.—Clinical and Experimental Contributions on Muscular Atrophy from Acute Rheumatic Arthritis. (*Lo Sperimentale*, and *Annali Univ. di Med.*, Nov. 1883.)

2417. Burresi.—Two Cases of St. Gothard Anæmia. (*Lo Sperimentale*, and *Annali Univ. di Med.*, Nov. 1883.)

2418. Gradenigo, G., jun.—Contributions to the Pathogenesis of Muscular Pseudo-hypertrophy. (*Annali Univ. di Med.*, Oct. and Nov. 1883.)

2419. Ferraro.—On the Physio-pathology of the Blood-vessels. (*L'Imparziale*, and *Gazz. Med. Ital. Prov. Venete*, Jan. 19, 1884.)

2420. Baumüller.—Ossifying Enchondroma of the Scalp. (*Centralbl. für Chir.*, No. 42, 1883.)

2421. Monastyrsky, N. D.—A Contribution to the Study of Morphology of the Micro-organism of Glanders. (*Ejened. Klin. Gazeta*, 1883, No. 28, pp. 441–46; No. 29, pp. 457–62; and No. 30, pp. 481–85.)

2422. Sorokin, Professor N. V.—On Micro-organisms in Angina. (*Vratch*, 1883, No. 40, pp. 625–6.)

2423. Remezoff, A.—A Contribution to the Study of Exudative Glomerulo-nephritis. (*St. Petersburg Inaugural Dissertation*, 1883, p. 41.)

2424. Hohlberg, A.—A Case of Polyorchismus. (*Vratch*, No. 38, p. 642, 1882.)

2425. Arloing and Chauveau.—On Gangrenous Septicæmia. (*Société des Sciences Médicales de Lyon*, July 1883.)

2426. Heubner.—On Experimental Diphtheria.

2427. Verneuil.—The Inoculation of Tuberculosis. (*Acad. de Med.*)

2428. Guiard.—On Ammoniuria.

2429. Landouzy and Martin.—Hereditary Transmission of Tuberculosis. (*Gaz. des Hôp*, Jan. 1884.)

2430. Teissier.—Trophic Lesions of the Aortic Valves in Locomotor Ataxy and other Nervous Diseases. (*Lyon Médical*, Feb. 1884.)

2431. Salvioli and Zaeslein.—The Micro-organism of Lobular Pneumonia. (*Gaz. Méd. de Paris*, Jan. 12.)

2432. Pasteur.—On Hydrophobia. (*Académie de Méd. de Paris.*)

2433. Struck.—Acute Infective Osteomyelitis. (*Deutsche Med. Wochensch.*, Nov. 14.)

2434. Friedländer.—Pneumonic Micrococci. (*Deutsche Med. Wochensch.*, Nov. 28.)

2435. Pohl-Pincus.—Micrococci in Scarlatina. (*Centralbl. für die Med. Wiss.*, No. 36, 1883.)

2436. Virchow.—Infection and Tuberculosis. (*Wiener Med. Blätter*, Dec. 6.)

2437. Leichtenstern.—Enlarged Kidneys in Scarlatina. (*Deutsche Med. Wochensch.*, Jan. 10.)

2438. Treves, F.—On Actinomycosis. (*Brit. Med. Jour.*, Jan. 1884, pp. 61 and 74.)

2439. Lilley.—Acute Intestinal Obstruction by Persistent Vitelline Duct. (*Ibid.*, Jan. 1884, p. 57.)

2440. Smith, R. S.—A Case of Acute Biliary Cirrhosis. (*Ibid.*, Jan. 1884, p. 101.)

2441. Cheyne.—Two Cases of Idiopathic Purpura Hæmorrhagica in which Organisms were found. (*Brit. Med. Jour.*, February 1884, p. 362.)

Art. 2415. *Freire on Hotbeds of Yellow Fever.*—Dr. Domingo Freire (*El Siglo Medico*, Dec. 9, 1883), commissioned by the Brazilian Government to inquire into the origin, prophylaxis, &c., of yellow fever, found on examining the earth from the cemetery of Jurujabù, where those dying from yellow fever in the Marine Hospital of St. Isabel were interred, that the soil was swarming with the same micro-organisms which exist in the vomit, blood, and urine of patients suffering from the disease. The soil was taken from the grave of a person who had died the year before, at the depth of one foot from the surface. In appearance, smell, and other characters it presented no peculiarities, but, on examination under the microscope with a power of 740 diameters, myriads of micro-organisms were seen, identical with those found in the organic liquids of the fever patients. These organisms are the cells of the *Cryptococcus xanthogenicus* in various stages of development, varying in size from a scarcely perceptible black point to more or less large round corpuscles, highly refractive, grey or black, or encircled with a black fringe or areola. Many of these organisms made spontaneous movements. Yellow masses spotted with granulations, due to the colouring matter of the cells, and black points, the remains of the cryptococci, were also seen, as were some rapidly moving vibriones. These observations, which were fully confirmed by Señores Chapot, Cæsar, and Caminhoa, show that the germs of yellow fever are perpetuated in cemeteries, which are so many hotbeds or nurseries for the cultivation of new generations destined to devastate the country. He recommends the removal of cemeteries to remote parts, or, better still, cremation.

2416. *Petrone on Muscular Atrophy from Acute Rheumatic Arthritis.*—When an arthritis is established, the extensors are generally the first to be affected. This may happen in the first twenty-four hours, but generally in the second week. The paralysis is little manifest, since the muscles lose hardly any of their contractile capacity. Often the paralysis precedes the atrophy; atrophy and paralysis do not always go *pari passu*; atrophy may be marked without any paralysis. The reason of this is unknown. While the paralyses and atrophies which follow traumatic arthritis may remain independent, in the rheumatic form the functional and nutritive disturbances are little apparent; they often go *pari passu*; and it is impossible to distinguish what belongs to the atrophy from what belongs to the paralysis. The state and intensity of the arthritic process, the age and sex of the patient, have no influence on the development of the atrophy. The greater number of cases of atrophy were noticed after affections of the knee and shoulder, only because these joints are most frequently affected. The author (*Lo Sperimentale*, and *Annali Univ. di Med.*, Nov. 1883) gives the results of his experiments on animals, which corroborate those of Valtat, which he also quotes. The knee or shoulder joints of dogs were injected with several drops of oil of mustard or of liquor ammoniæ. In all, rapid swelling of the joint ensued with atrophy. After death, the muscles surrounding the joint were found to be much smaller than those of the corresponding healthy joint. In the experimental lesion, the atrophy is apparently more rapid and extensive than in rheumatic arthritis in man. In the dogs observed by the author, the spinal cord and the nerves of the affected joints were quite normal; in the muscles, the signs of simple atrophy were only seen. The nature of the muscular atrophy in man is unknown. Debove relates one case of diffused muscular atrophy following chronic rheumatism, which was complicated with a true chronic interstitial myositis. The author combats some of the opinions held as to the pathogenesis of the atrophy. To the most common, that the atrophy depends on functional inertia, he objects that in paraplegia and hemiplegia of central origin the muscles, although paralysed, are atrophied slowly and less than in cases of arthritis. Moreover, the wasting of the muscles happens not only in grave and painful joint affections, but also in indolent hydrarthrosis; lastly, atrophy takes place too rapidly to be ascribed to inertia. From the acute course of the atrophy, and because in dogs he found no lesions of nerve or muscle, the author rejects the hypothesis of Sabourin and Revillout, according to whom the inflammation of the articular tissues, propagated to the nerves in the vicinity of the joint, is the origin of the atrophy of the muscles about the joint. The hypothesis of Vulpian and Charcot, that the articular nerves, irritated by the arthritis, determine in the point of origin of the nerve-fibres destined to the muscles a modification by which the activity of the anatomical elements of this part of the grey substance of the cord is weakened, he thinks has no anatomical foundation. To understand the mode in which the synovial inflammation interferes with the nutrition of the neighbouring muscles, it is necessary to seek the anatomical relations between the articular tissues and the periarticular muscles. The treatment consists in the employment of permanent weak continued currents.

2417. *Burresi on St. Gothard Anæmia.*—The

author (*Lo Sperimentale*, and *Annali Univ. di Med.*, Nov. 1883) refers to the history of two miners, which confirms the opinion attributing to the parasite an essential part in the pathogenesis of the anæmia. Certain considerations on the mode of development of the parasite, suggested by the following facts, he finds inexplicable by the present naturalistic and experimental knowledge of the ankylostoma. 1. The miners often fall ill after having left St. Gothard. 2. The disease, already cured, may be reproduced far from the place of infection, as happened in the second of the patients, who was discharged from the hospital of Genoa apparently cured by anthelmintic treatment. No eggs of the ankylostoma were then to be found in the fæces, but after three months he became again anæmic, and, treated with anthelmintics, 500 ankylostomata were passed, after which he quickly recovered. 3. The patients recover slowly, even if treated with anthelmintics. These facts, according to Burresi, cannot be easily explained, for it is now admitted that infection can only take place outside the organism ; that is, the eggs, to develop, must be carried out of the intestine, and he cites in this connection the well-known experiments of Grassi and Perroncito. But, according to Burresi, the explanation of these facts would be easy if, under certain conditions, the larva and the worm could be developed from the egg in the intestinal tube ; for then, if two parasites only of different sex remained, these might multiply and give rise to relapses after longer or shorter intervals, even after the patient was far removed from the place of infection ; the difficulty of expelling entirely the parasite would explain the difficulty of complete cure in this disease. This conjecture would find analogy in the fact that in the pseudo-rhabditis stercoralis (Perroncito) the egg is hatched and produces the perfect animal even in the intestine.

2418. *Gradenigo on the Pathogenesis of Muscular Pseudo-hypertrophy.*—In a very interesting and complete paper on this subject in the *Annali Univ.* for October and November 1883, Dr. Gradenigo gives the following conclusions. Muscular pseudo-hypertrophy is a well-defined morbid form, essentially myopathic. The anatomical alteration observed in the muscles has its origin in a congenital incapacity of resistance (deficient histogenic energy) of the striped muscular fibre. The muscles, which in their embryonic formation are not derived from the primitive muscular layers, are not affected by the disease. The intensity of the morbid process varies in the individual muscles affected in relation with the physiological mechanism modified in a determined direction. The hypertrophy of the muscles is compensatory. The wasting and the enlargement of certain muscles can be attributed to one and the same morbid process ; the anatomical fact does not differ essentially from that proper to other affections of the muscles. The dichotomous division of the muscular fibres may, perhaps, be considered as characteristic of this disease. The pathogenesis of this disease, primarily myopathic, is secondarily neuro-myopathic.

2419. *Ferraro on the Physio-pathology of the Blood-vessels.*—The blood of diabetic patients under microscopic examination presents nothing characteristic to distinguish it from that of a healthy individual. The spontaneous coagulation takes place normally. In diabetics, the blood may coagulate in any point of the circulatory system, and give rise to the formation of thrombi causing more or less obstruction, wherever the conditions favourable to its spontaneous coagulation are found. The blood of rabbits surcharged artificially with glucose coagulates, but more slowly. When the intima of a large artery (the carotid) of a dog is destroyed either by mechanical or chemical means, or by a very high temperature, if the vasa vasorum be not injured at the same time, the blood circulating in the artery does not coagulate. On the other hand, there is thrombotic occlusion of the artery whenever the middle coat is injured as well as the intima, and especially if, besides the intima, the vasa vasorum have been destroyed. This experimental lesion of the intima of the carotid of the dog is similar to that which diabetes mellitus produces in man, in whom the intima of the arteries is often lost from desquamation of its cells, *endoarteritis diabetica desquamativa.* In both cases, the circulating blood does not coagulate in the arteries despoiled of their intima, if the rest of the wall of the vessel be alive and nourished as in the normal state. Endarteritis diabetica, desquamative in form, described by the author in the organs of five diabetics, finds support in these experiments, the object of which was to produce in animals by other means a lesion of the intima of the arteries similar to that which diabetes produces in man. The results obtained agree in showing the influence of a vessel-wall thus altered on the blood circulating in the vessel. It is then possible that from certain morbid conditions the epithelioid lining of an artery or the whole intima may be lost, and yet for the blood traversing this vessel not to coagulate and not to form a thrombus, if other circumstances favouring thrombosis do not intervene. This being possible, since demonstrated by pathological observation in diabetes mellitus and by experiment, it must be held that the influence of the living arterial wall on its contained blood, by which its spontaneous coagulation is prevented, is not due exclusively to the epithelioid layer investing the internal surface, but also to the rest of the wall of the vessel. If the epithelial stratum be destroyed by any morbid condition whatsoever, the rest of the wall, if alive, may exercise the same influence on its contained blood. In the normal condition, the intima of the arteries receives the nutritive plasma partly from the blood circulating in the interior of the vessel, by which it is constantly bathed, and partly from that circulating in the vasa vasorum of the contiguous middle coat. If the vasa vasorum be destroyed, the neighbouring intima is not always able to retain its vitality. G. D'ARCY ADAMS, M.D.

2420. *Baumüller on a Case of Ossifying Enchondroma of the Scalp.*—The following case from the hospital practice of Professor Kraske, of Freiburg, has been reported by Dr. B. Baumüller (*Centralbl. für Chir.*, No. 42, 1883). The patient, a woman aged 23, six years before she came under the notice of Professor Kraske had first noticed over the right parietal eminence a hard movable tumour of the size of a cherry-stone. The tumour had remained painless, and increased in size very slowly. On account of slight inflammation and ulceration caused by irritating action of the comb, the patient wished to be relieved of the growth. It was removed without difficulty, and on section was found to be made up partly of hyaline cartilage, partly of newly formed spongy bone, which presented under the microscope the characteristic appearances of endochondral or neoplastic ossification. In his comments on this case, Dr. Baumüller states that a correct

diagnosis was not made before the operation. The firm consistence of the growth, its mobility, and some ulceration of the skin at its most prominent part, led to the supposition that it was an atheromatous tumour, which had begun to perforate. This error was excusable, as enchondroma occurs very rarely in the scalp. With the exception of a case of enchondroma of the head briefly mentioned by Gurlt, and a case of a calcified tumour described as enchondroma by C. O. Weber, who, however, was not quite clear as to its precise nature, but one instance of the kind has been recorded. Israel reported of a man, aged 54 years, who was the subject of sarcoma of the left orbit, that he had also an irregularly shaped tumour, of cartilaginous hardness, over the posterior part of the right parietal bone. This, after extirpation, was found to be entirely made up of hyaline cartilage. The main interest of Kraske's case, as Dr. Baumüller points out, consists in its relation to modern views of the origin of tumours. Even those surgeons who do not allow the general validity of Cohnheim's hypothesis of the etiology of new growths, are readily disposed to acknowledge an embryonal origin of enchondroma, especially when it occurs in soft parts. Indeed, before Cohnheim's time it was supposed that enchondroma of the parotid gland and adjacent region owed its origin to persistent portions of the branchial arches that had been arrested in growth. In this case of a growth of pure hyaline cartilage which had undergone in part typical ossification, and presented an intermediate structure resembling the epiphysal line of an extremity of growing bone, one would be disposed to attribute the origin of the tumour to some embryonal structure. But, as Dr. Baumüller points out, in the region from which this tumour was taken, no hyaline cartilage exists at any period of embryonal life. The parietal bones are formed by direct ossification of connective tissue; and also the adjacent upper portion of the occipital bone, from which there might probably have been an offshoot analogous to the interparietal bone of many mammals, is not developed from cartilage.

W. Johnson Smith.

2421. *Monastyrsky on the Micro-organism of Glanders.*—In the *Ejened. Klin. Gazeta*, 1883, Nos. 28, 29, and 30, Dr. N. D. Monastyrsky, of Petropavlovsky Hospital, St. Petersburg, describes a case of acute glanders in a working man, aged 18, which in ten days ended in death. About eight hours before the patient's death the author obtained specimens of the blood, contents of a fresh nodule, and pus from the pustules, and excised two pieces of the skin, one of which contained a nodule, and the other a lymphangitic strip. On microscopic examination, he (like Dr. N. P. Vasilieff, in the London Medical Record, May 1883, p. 201) found in the blood numerous isolated and grouped rod-shaped bacteria strongly resembling tubercle-bacilli, and often containing spores; at the same time he detected in all the blood-preparations examined scanty micrococci, isolated or in the shape of diplococcus or zoogloea. Neither the contents of fresh nodules nor pus from an old pustule presented any bacilli; but the micrococci in them were very numerous. The excised nodule also contained enormous numbers of micrococci, which were crowded in 'cloud-like' fashion, mainly in the central part of the cavity, and in the layers adjoining the slough. In the deep parts of the contents of the cavity, the micrococci were less abundant, and formed only small groups, with an admixture of scanty rods. Examination of the excised lymphangitic piece of skin showed similar 'cloud-like' accumulations of micrococci, occupying chiefly the centre of the lumen of the inflamed lymphatic vessel. In the fibrillar connective tissue around the vessel micrococci were scattered only in small numbers, being again united with a few bacilli (which were entirely absent in the lumen of the vessel). The bundles of connective tissue were penetrated and encircled by abundant long threads of a leptothrix form. Beside these specimens obtained during the patient's life, Dr. Monastyrsky examined *post mortem*—1. some portions of the indurated and nodulated lung, in the capillaries of which bacilli prevailed, and, in the alveoli, micrococci; 2. portions of the spleen, in which he found only scanty rods and micrococci; the thread-like formations, on the contrary, being met very often; 3. portions of the kidney; bacilli and micrococci were present in the Malpighian tufts and uriniferous tubes, leptothrix-forms being exclusively found in the latter, where they twined round hyaline casts; 4. portions of the liver, in which bacilli and micrococci were detected chiefly in the blood-vessels. The author thinks that rod-shaped bacteria, cocci, and thread-like forms, as observed by him in this case, are nothing else but various stages of development of the specific micro-organism of farcy. [Papers on the same subject, by Bouchard and Israel, may be found in the London Medical Record, April 1883, p. 155.—*Rep.*]

2422. *Sorokin on Micro-organisms in Angina.*—In a short preliminary note in the *Vratch*, 1883, No. 40, p. 625, Professor N. V. Sorokin, of Kazan, states that he has discovered a new polymorphic micro-organism, which is invariably met in cases of follicular tonsillitis. The author proposes to name this micro-organism, leptothrix anginæ.

2423. *Remezoff on Exudative Glomerulo-nephritis.*—To study the conditions of the Malpighian bodies in acute parenchymatous nephritis, Dr. A. Remezoff, of Professor N. P. Ivanovsky's laboratory, microscopically examined (*St. Petersburg Inaugural Dissertation*, 1883) the kidneys from twenty cases of various infectious diseases (relapsing fever, typhoid fever, typhus, scarlatina, septicæmia, dysentery), as well as the kidneys from five dogs, in which nephritis was experimentally produced by subcutaneous injections of tincture of cantharides, and of solution of bichromate of potassium. In all the cases, the glomeruli and their capsules presented more or less pronounced changes, which were these. The vessels showed swelling of the nuclei, granular fatty degeneration of the wall, opacity, fatty degeneration and desquamation of their epithelial covering, and, in some cases (in four cases of septicæmia, enteric fever, and dysentery) the presence of micrococci, which sometimes occluded the whole lumen of the vessel. The capsules were sometimes thickened and surrounded by a zone of cellular infiltration. The capsular cavities contained coagulated albuminous matter, with admixture of desquamated, more or less degenerated epithelial cells, of white and red blood-corpuscles, and, sometimes, of micrococci. Dr. Remezoff sums up his views on the subject as follows. 1. In acute parenchymatous nephritis, the Malpighian tufts participate in the morbid process in common with the convoluted tubules, but the alterations in the latter are more marked than in the former. 2. In connection with, and probably in direct depend-

ency upon, the changes in the Malpighian bodies, there occurs albuminous exudation within the capsules. 3. Accumulation of the exuded products gives rise to compression of the vascular loops of the tuft, and, together with constriction of the vascular lumen in consequence of swelling of the nuclei, leads to a decrease in the secretion of urine. 4. The absence of albuminous masses in the capsules of the Malpighian bodies in the kidneys from healthy individuals, and the presence of the said masses in the nephritic kidney induce us to admit that the tufts present the place of the excretion of albumen in acute nephritis. 5. The fact of a coagulated granular exuded mass being often seen penetrating from the capsule into the beginning of a convoluted tube, leads to the belief that capsular exudation takes a part in the formation of so-called fibrinous casts.

2424. *Hohlberg on a Case of Polyorchismus.*—In the *Vratch*, No. 38, p. 642, 1882, Dr. A. Hohlberg reports the case of a Bulgarian peasant, aged 18, in whom he accidentally (during a forensic examination of the injuries received by the patient in a fight) discovered the presence of three fully developed testes, two of them lying one above the other in the right half of the scrotum. The right spermatic cords were considerably thinner than the left cord. [Instances of this extremely rare anomaly were lately published by Cebeira, Bassanovitch (see the London Medical Record, Nov., p. 468, 1882), A. D. Jdanoff, of St. Petersburg (in the *Ejened. Klin. Gazeta*, No. 26, p. 443, 1883), and B. Bulatoff, of Irkutsk (*Ibid.*, No. 22, p. 358, 1883). Dr. Jdanoff's case refers to a soldier, aged 21, in whom at first an inguinal hernia was erroneously diagnosed. Dr. Bulatoff's patient, also a soldier, aged 23, in whom the author's diagnosis of the *testiculum tertium seu supernumerarium* had been confirmed by Drs. Eliashevitch, Seletoff, and Kurkutoff, was recognised as unfit for military service and dismissed accordingly, on the account of his third testicle usually resting in the inguinal canal, and thus being exposed to traumatic influences.—*Rep.*] V. Idelson, M.D.

2425. *Arloing and Chauveau on Gangrenous Septicæmia.*—A discussion took place in July 1883, at the Société des Sciences Médicales de Lyon, with reference to a paper by MM. Arloing and Chauveau on gangrenous septicæmia. They have come to the conclusion that this disease is due to the action of a special micro-organism, which occasionally penetrates into the body through some wound, and which can then be found in the cellular tissue around it, and in the phlyctænæ which form in the vicinity. The micro-organism has the shape of a short rod with a spore at one end, or, more rarely, at both. When it appears in the blood at the end of the disease, or after death, it often assumes the form of micrococci; in serous membranes, on the contrary, it is thin and elongated. Experiments on horses, dogs, cats, birds, and other animals, have proved that the virus is inoculable, but it must be introduced by injection into the cellular tissue. Fresh wounds of the skin, cellular tissue, and muscles did not seem to absorb it; and simple inoculation was rarely attended with success. It has also been noted that the virus is rarely, if ever, absorbed by the alimentary canal. On the contrary, if by injection into the blood it be brought into contact with a tissue deprived of vitality or disorganised by hæmorrhage, it is placed in the best conditions for action. This is an important point, since it explains how a wound can be made septic by the virus circulating in the blood. Generally speaking, contused and lacerated wounds are most favourable to its development. Immunity can be obtained in animals by repeated injections of small quantities of virus into the blood. The micro-organism is remarkable by its great resistance to the action of antiseptic agents. At a temperature of 15° C. (59° F.) sulphurous acid alone destroys the fresh micro-organism in less than twenty-four hours, but a temperature of 90° to 100° C. (194° to 212° F.) destroys it in fifteen minutes. For the destruction of the dried virus a temperature of 120° C. is necessary. Acting upon the result of these experiments, M. Tripier sterilises his instruments and dressings by heat, and expresses himself satisfied with this practice. The fact is all the more noteworthy, as it appears that gangrenous septicæmia is still endemic in the Hôtel Dieu at Lyons.

2426. *Heubner on Experimental Diphtheria.*—Bearing in mind the researches of Cohnheim and Litten, the author has attempted to produce diphtheritic lesions by the temporary arrest of the circulation in an organ. The neck of the bladder was tied in a rabbit for two hours, and the next day a considerable hæmorrhagic œdema had taken place in the mucous membrane; the third day, diphtheritic patches showed themselves, and, later on, dry gangrene (*coagulations-necrose*) of the mucous and submucous tissues supervened. The appearance of the diseased parts was the same as that of true diphtheritic membranes. Having inoculated an animal suffering from artificial diphtheria with true diphtheritic membranes, Heubner observed a swelling of the spleen, hæmorrhages on the serous membranes, and death after two days. The parts made artificially diphtheritic contained a very active virus which killed other animals in a short time, while inoculations with the healthy part of the mucous membrane did not give any result. Heubner concludes that the virus was the result and not the cause of the disease, and that the true diphtheritic poison remains to be found.

2427. *Verneuil on Inoculation of Tuberculosis.*—At the meeting of the Académie de Médecine in Paris on January 22, M. Verneuil reported the case of a medical student whose left index finger had become the seat of an unhealthy suppuration a few days after he had made the *post mortem* examination of a child. The ulcer remained uninfluenced by every treatment, general and local; and in 1880, three years after the beginning of the disease, it became necessary to amputate the finger. At the same time an abscess, which had formed on the dorsal aspect of the hand, was opened, and numerous greyish granulations were observed on its walls. Last year M. Verneuil saw this young man again; he was then suffering from vertebral abscesses, and there had been symptoms of spinal meningitis. M. Verneuil thinks that this might be a case of inoculation with tubercular matter, but it has not been proved that the child had died of tuberculosis.

2428. *Guiard on Ammoniuria.*—In an essay, for which the author obtained the Civiale Prize, we find a discussion of the most recent views on the ammoniacal fermentation of the urine. Guiard thinks that the micro-organisms introduced by the catheter are the primary cause of the decomposition of the urine, but that their action is much influenced by the state of the mucous membrane. The micro-organisms have little or no action on the urine when the bladder

is healthy; but, when the mucous membrane is inflamed, ammoniacal transformation rapidly sets in.

2429. *Landouzy and Martin on the Hereditary Transmission of Tuberculosis.*—Some recent experiments quoted in the *Gaz. des Hôp.* for Jan. 8, 1884, tend to prove that tuberculosis may be produced in healthy animals by inoculation with the placenta, fœtus, and spermatic fluid of tubercular subjects. The authors believe that in some cases the disease is transmitted directly from parent to offspring, while in others the predisposition only is inherited.

2430. *Teissier on Trophic Lesions of the Aortic Valves in Locomotor Ataxy and other Nervous Diseases.*—In the *Lyon Médical* for Feb. 1884, the author states that cardiac lesions and especially perforations of the aortic valves are not unfrequent in locomotor ataxy, disseminated sclerosis, paralysis agitans, epilepsy, and tumours of the brain. He gives the results of thirty-five *post mortem* examinations, in eight of which these valves were found thin and perforated. It is probable that some sudden exertion may cause the rupture of a valve already weakened by insufficient nutrition. One of the author's patients was suddenly seized after a long walk with severe pain in the chest, dyspnœa, and palpitations; at the same time he heard a whizzing noise in his chest, and auscultation of the heart a few hours afterwards proved the existence of aortic regurgitation.

2431. *Salvioli and Zaeslein on the Micro-organism of Lobular Pneumonia.*—The views of the authors, as quoted by the *Gaz. Médicale de Paris*, Jan. 12, are in favour of the existence of special organisms similar to those described by Friedländer; they were found after the third day of the disease in the sputa, in the blood, and in the bullæ formed by blisters. Their number increased until the seventh day, and then decreased. These micro-organisms, when injected under the skin of rabbits and rats, produced the lesions of lobular pneumonia.

2432. *Pasteur on Hydrophobia.*—The results of Mr. Pasteur's experiments were presented to the Académie de Médecine, Paris, on Feb. 26. They show that the virus has been found in the saliva, brain, spinal cord, peripheral nerves, and sometimes in the cerebro-spinal fluid. The medulla oblongata of a rabid animal contains an enormous number of very fine granules, which are supposed to be the virus, but which have not yet been satisfactorily isolated. When the virus is injected into the subcutaneous cellular tissue or into the veins of a healthy animal, the paralytic form of the disease is produced, while the furious form appears after inoculation of the virus upon the surface of the brain. M. Pasteur thinks that the virus may be attenuated by passing through different species of animals, and that immunity may perhaps be conferred on dogs, though on this point the experiments are not conclusive.

J. S. Kaeser, M.D.

2433. *Struck on Acute Infectious Osteomyelitis.*—The *Deutsche Med. Wochensch.* of Nov. 14 contains a paper by Dr. Struck on the recent investigations into the exciting cause of acute infectious osteomyelitis. The investigators have succeeded in cultivating the micrococci in sterilised fluids, and have even been successful in inducing the disease in animals; a preliminary contusion or fracture being, however, always necessary. The presence of the micrococci in the sterilised fluid is always characterised by an orange-coloured precipitate, in which the organisms are seen microscopically in great numbers.

2434. *Friedländer on Pneumonic Micrococci.*—At the meeting of the Verein für innere Medicin, on Nov. 19 (*Deutsche Med. Wochensch.*, Nov. 28), Herr Friedländer related his experiments with the cultivation of pneumonic micrococci. He has succeeded in finding a peculiar coccus in pneumonia, which he has cultivated in suitable substances, and by the injection of his cultivated material he has induced pneumonia in mice, guinea-pigs, and dogs; the mice, however, proving themselves to be the most susceptible. The appearance of the lungs was exactly that of pneumonic infiltration, and the tissues and fluids of the body contained the same micro-organisms, which could, in their turn, be cultivated. These organisms are different from those described by the Italian investigators, Salvioli and Zaeslein, possessing an external capsule, not so easily coloured as the centre nucleus, and being innocuous to rabbits, which are easily infected by the Italian injections. Herr Friedländer mentioned, in answer to questions, that he had not made the injections in any other part of the body than the lungs and the pleural cavity.

2435. *Pohl-Pincus on Micrococci in Scarlatina.*—Dr. Pohl-Pincus, of Berlin (*Centralbl. für die Med. Wiss.*, No. 36, 1883), has succeeded in discovering micrococci in the epidermic scales shed in scarlatina. He finds them most abundantly in the scales which lie nearest the part which was attached to the skin; but care is necessary in the preparation of the specimens, to avoid their being washed away. The piece of epidermis is moistened with a saturated solution (alcoholic) of methyl-violet; after a few minutes fragments of the coloured portion are removed with a needle and laid for some time in distilled water. They are then placed on an object-glass and broken very small, after which they are dried, and mounted in oil of cloves and Canada balsam. The micrococci belong to the smallest variety, and lie loosely among the cells of the epidermis. The author suggests that disinfection of the skin in scarlatina ought to begin at the commencement of the fever, as the collection of the little sources of contagion must increase the severity of the illness. He proposes to make some therapeutic experiments to follow up his discovery.

2436. *Virchow on Infection and Tuberculosis.*—The *Wiener Med. Blätter* of Dec. 6 reports a lecture of Prof. Virchow on infectious disease in general, and tuberculosis in particular. He takes for his text the recent experiments by Herr Falk on the possibility of the successful inoculation of tuberculosis, expressing himself as by no means surprised at their unsuccessful result, tubercle not appearing to him to have the usually accepted characteristics of infection. He finds fault with the prevailing confusion between infection and contagion, giving as examples that intermittent fever is infectious but not contagious, while the itch is contagious but not infectious. He points out that we must distinguish between the effect of the micro-organisms on the part of the body where they are found and on the general organism; and he contends that tubercle does not possess the specific toxic effect on the whole body, which can be proved to exist, for example, in the charbon poison. He considers, then, that tubercle, so far from belonging to the class of diseases which can be provided against by inoculation, should rather be referred to those where

an entrance of the poison into the body renders it more liable to future inroads, just as in the case of favus. He concludes by deprecating the use of the word 'tubercle' as applied alike to a veritable knot in the tissue (which is its true meaning), and to a diffused infiltration, as in caseous pneumonia. The word which ought to be common to such conditions is bacillus, and, instead of asking 'is caseous pneumonia also tubercle?' the question should be, 'does caseous pneumonia contain bacilli?'

2437. *Leichtenstern on Enlarged Kidneys in Scarlatina.*—In the General Medical Society of Cologne, in April 1883, Herr Leichtenstern showed two kidneys from a case of scarlatina (*Deutsche Med. Wochensch.*, Jan. 10). They measured each 6 inches in length, 2¾ and 3 inches in breadth respectively, and 2⅝ inches in thickness, and both together weighed 573 grammes (about 20¼ ounces). The patient was a girl aged 21, who had died on the thirteenth day of the fever, and the chief peculiarities of the case were the great extension of the eruption over the whole body, the development of throat symptoms on the fourth day of the illness, the hyperpyrexia, 42°·1 C. (107°·8 F.), the strong delirium, occurring first when the fever intermitted on the eighth day, and the persistent redness of the skin after the beginning of desquamation. Albuminuria did not appear until the day before death, although the urine was carefully examined from the beginning of the illness. The enlargement of the kidneys wa caused by excessive œdema.

ALICE KER, M.D.

2438. *Treves on Actinomycosis.*—Mr. F. Treves (*Brit. Med. Jour.*, Jan. 1844, pp. 61 and 74) showed a patient at the Pathological Society, who presented a series of peculiar ulcerations and growths extending from the neck and jaw obliquely across the chest. The case agreed in every point and feature with those described by Ponfick (*Brit. Med. Jour.*, 1882, Vol. i., p. 545). If the diagnosis were correct, a point only to be determined by observation of the peculiar fungus under the microscope, then the case would be the first ever recognised in this country.

2439. *Lilley on Acute Intestinal Obstruction by Persistent Vitelline Duct.*—Dr. Lilley, in the *Brit. Med. Jour.*, Jan. 1884, p. 57, reports the case of a young man, aged 21, who was admitted to the hospital of the Convict Prison at Portland early on the morning of Feb. 5, complaining of pain in the abdomen, with retching and constipation. The symptoms rapidly became more urgent, notwithstanding frequent sinapisms and the free use of opium; the vomit became stercoraceous, and soon after noon on Feb. 6 the patient died. On *post mortem* examination it was discovered that a diverticulum was given off from the main tube of the ileum, about eighteen inches above the cæcum. This prolongation, about two inches and a half in length, terminated in a *cul-de-sac*, and was tense with dark fluid and fæcal contents. This proved to be the remains of the vitello-intestinal duct, originally uniting the small bowel with the umbilical vesicle. This distended prolongation was twisted upon itself and thrown across the ileum, thus compressing and displacing the intestine, and paralysing its action. [In the *Journal*, March 1883, p. 255, a somewhat similar case is reported by Dr. Bramwell.—*Rep.*]

2440. *Smith on a Case of Acute Biliary Cirrhosis.*—Dr. Shingleton Smith, in the *Brit. Med. Jour.*, Jan. 1884, p. 101, records the case of a man, aged 33, who was admitted into the Bristol Royal Infirmary on March 20, 1883. He was deeply jaundiced everywhere, with marked tenderness over the region of the liver; urine contained abundance of bile but no albumen; temperature normal; tongue moist. On March 26, 27, and 28 the patient had marked epistaxis, and became delirious; œdema of the legs followed, and on March 31 coma set in, with dilatation of the pupils, quickly followed by death. At the necropsy, the liver was found to weigh 49 ounces. No obstruction of the biliary duct could be found, nor were there any calculi in the gall-bladder. The substance of the liver was hard and tough; it was of a dark-yellow copper colour, mottled with lighter parts between. In section, all the lobules were distinctly visible, the individual lobules being isolated from each other by a grey intervening substance; the lobules were of a dark-yellow colour, affording a marked contrast to the grey substance between. On microscopic examination, the individual lobules of the liver were found to be separated by a connective tissue growth. The lobules were not diminished in size; the cells were quite distinct and well defined. The sections of the liver showed numerous branches of the hepatic ducts running through the new tissue between the lobules, forming, in many parts, a plexus of tubes, all containing a cubical-celled epithelium with large nuclei. The case supports the view adopted by Thierfelder, Bamberger, and others, that a form of cirrhosis exists in which atrophy of the liver-tissue is not present, jaundice sets in early, but ascites does not occur. The most prominent pathological condition is the presence of a great development of new bile-ducts along the interlobular passages, around which there is an overgrowth of connective tissue, resulting in a general unilobular cirrhosis, as opposed to the ordinary multilobular cirrhosis, in which the development of new bile-ducts is not a striking feature.

2441. *Cheyne on Two Cases of Idiopathic Purpura Hæmorrhagica in which Organisms were found.*—Mr. Watson Cheyne, in the *Brit. Med. Jour.*, February 1884, p. 362, relates that in two cases of idiopathic purpura he found the capillaries at the seat of the hæmorrhages blocked with bacilli; and here and there, among the effused blood, a few colonies were found. From the size of the colonies and distension of the vessels, it was evident that bacilli had been growing in them for some time. The micro-organisms in the two cases, however, were not identical, and differed in their mode of growth from most other organisms of the same class, in that they formed colonies in the vessels. Other bacilli which have been described as growing in the blood do not form plugs in the vessels, with the exception of the typhoid bacillus.

RICHARD NEALE, M.D.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

RECENT PAPERS.

2442. HUBER.—Meconium in its Forensic Aspects. (*Friedreich's Blätter für Gerichtl. Med.*, 1884, pp. 24, 142.)

2443. LESSER.—Necropsies on the Drowned. (*Vierteljahrsschr. für Gerichtl. Med.*, 1884, p. 1.)

2444. ROSSI.—Poisoning with Strong Doses of Chloral. (*Gazz. degli Ospitali*, Oct. 10, 1883; *Lo Sperimentale*, December 1883.)

2445. Casiccia.—A Case of Poisoning by Cannabis Indica. (*Riv. di Chim. Med. e Farm.*, September 1883.)

2446. Giacomelli.—A Ptomaine having the Chief Properties of Picrotoxin. (*Lo Sperimentale*, Oct. 1883.)

2447. Smidovitch.—On a Case of Poisoning by Belladonna. (*Proceedings of the Tula Medical Society*, 1882.)

2448. Kennedy.—Poisoning by Red Precipitate. (*Brit. Med. Jour.*, Jan. 1884, p. 56.)

2449. Broadbent.—Alcoholic Poisoning. (*Brit. Med. Jour.*, Feb. 1884, p. 358.)

2450. Debierre.—Poisoning by Bonjean's Ergotine. (*Bull. Gén. de Thérap.*, January 1884.)

2451. Layet.—Poisoning by Vanilla. (*Revue Sanitaire de Bordeaux*, Feb. 1884.)

2452. Faucon and Debierre.—Subcutaneous Injections of Chloral in Poisoning by Strychnia. (*Revue de Thérap.*, Feb. 1884.)

2453. Ludwig and Mauthner.—Suspected Arsenical Poisoning. (*Wiener Med. Blätter*, Jan. 3, 10, and 17.)

2454. Behring.—The Treatment of Poisoning by Iodoform. (*Deutsche Med. Wochensch.*, Jan. 31.)

Art. 2442. *Huber on Meconium in its Forensic Aspects.*—Dr. J. Ch. Huber (*Friedreich's Blätter für Gerichtl. Med.*, 1884, pp. 24, 142) treats this subject elaborately, and gives a bibliography extending from the time of Aristotle downwards. According to his own observations, the most important substance found in meconium is that greenish-yellow body which more especially determines the colour of the dark greenish-black masses. These bodies, which Tardieu admirably depicts in his *Study on Infanticide*, are mostly of oblong, elliptical, oval, or roundish contour, and are not unfrequently flaky with rounded angles. In size they range from that of a microcyte (and less) to that of a squamous epithelial cell from the tongue. As these bodies, which appear to be altogether homogeneous in structure, are enveloped in mucus, it is very difficult to ascertain how they behave towards chemical reagents, which penetrate them slowly. They are unaltered by acetic acid and by ether, but dissolve in solution of potash. The bile-pigment reaction has been obtained from them by good observers. It is more difficult to decide what is their basis (albumin or keratin?), whence they arise. When we take into consideration the abundant shedding of epithelium in the small intestine of the fœtus, Huber cannot avoid the conclusion that we have here to do with intestinal epithelial cells, which have become swollen, confluent, and disintegrated. On account of their frequently characteristic form, and the ready possibility of their detection in dried meconium stains, he holds these bodies to be of great importance, and, at any rate, as much more characteristic than those amniotic elements which have been swallowed.

2443. *Lesser on Necropsies on the Drowned.*—Dr. A. Lesser (*Vierteljahrsschr. für Gerichtl. Med.*, 1884, p. 1) reviews, from the point of his own experience, the *post mortem* appearances met with in the drowned, more especially with reference to diagnosis of the cause of death. He attaches but little importance to the data met with on a *post mortem* examination. The contents of the stomach and intestines are, he thinks, of no import. Inflation of the lungs proves nothing as to the cause of death. Apart from abnormalities of the pulmonary parenchyma, *e.g.* vesicular emphysema, considerable pulmonary œdema is constantly met with when the air-way is impeded, be the hindrance in either the smaller or the larger bronchi, in the trachea, or in the throat; and whether the obstruction take place during life or after death (*e.g.* ejection of the contents of the stomach). In capillary bronchitis, the relations of the smaller bronchial tubes to the pulmonary tissue are exactly the same as are constantly met with in drowning; also the presence of mucus in the larger bronchial tubes, as a cause of the pulmonary inflation, is irrelevant to the question. It is only when very abundant masses of fine froth are found, more or less completely filling the larynx and trachea, when the origin of this froth *in loco* is manifest (absence of œdema of the lung, *e.g.*), if simultaneously mucus in the smaller bronchi prevents pulmonary collapse, that, according to Lesser, the diagnosis of death from drowning can be made from the results of the necropsy alone; for, according to his experience, such aggregate results never ensue from catarrh. When, in an undecomposed corpse, with healthy respiratory organs, no inflation is found, and this in consequence of there being mucus in the smaller bronchi, death by drowning is excluded. In putrid bodies, or with the putrefactive processes advanced in the bronchi and the lungs alone, this conclusion is no longer tenable. The absence of air-vesicles in the larynx and trachea does not exclude the immersion of the body in the medium before death, just as the presence of air-vesicles in the tracheal and laryngeal fluids is compatible with the production of these after death.

Thomas Stevenson, M.D.

2444. *Rossi on a Case of Chloral-poisoning.*—The author relates (*Gazz. degli Ospitali*, Oct. 10, 1883), the case of a strong young man who took 28 grammes of chloral in four doses, at intervals of a quarter of an hour. The first dose was taken at seven in the evening, half an hour after dinner. Two hours later, when Dr. Rossi saw the patient, he looked as if struck with severe cerebral hæmorrhage. The face was congested; respiration was stertorous, 32 to the minute; pulse 112; temperature normal. There was complete anæsthesia of the skin and of the conjunctiva, with total relaxation of the muscular system; pupils small but not immobile. Neither vomiting nor defecation had occurred. Vomiting was induced twice by tickling the throat with a feather. A large quantity of food in course of digestion, smelling strongly of chloral, was rejected. A number of mustard papers were applied, and a gramme of sulphuric ether was injected hypodermically. A bladder of ice was put to the head, and a clyster of 200 grammes (!) of alcohol was administered. These measures occupied a couple of hours. At the end of this time the patient began to move his arms, and shortly after he sat up in bed. Next day he had only a headache and some discomfort, from the sinapisms. A full dose of citrate of magnesia opened the bowels and relieved the head; and in the evening the only ill effect remaining was a little weakness. The happy issue of the case is ascribed to the fact that the poison was taken on a full stomach, and to early treatment.

2445. *Casiccia on a Case of Poisoning by Cannabis Indica.*—Two grammes of alcoholic extract of cannabis Indica were taken suspended in water at four o'clock in the morning. Half an hour afterwards, symptoms of poisoning arose. Dr. Casiccia saw the patient two hours after the drug had been taken. The symptoms then present were a marked tendency to motion, mental excitement and confusion, formication of hands and feet, sense of heat in the epigastrium, dryness of fauces, nauseous taste in the

mouth, tongue clammy, pupils dilated, re-acting to light; there were flashes of light before the eyes, and the surrounding objects seemed distant; the pulse was full and slow, fifty-eight beats a minute; sensibility to pain was unaffected. The muscular excitement was very great. The patient kept moving his hands, arms, and legs. The muscles of his face, too, were in constant movement, expressing sometimes sadness, but generally, joy. At intervals he cleared off the bed-clothes and made a sudden jump. He talked incoherently and without interruption, at times uttering a cry or a howl. The treatment adopted was a cup of strong coffee and a decoction of cinchona. No mention is made of vomiting. At nine o'clock, that is, five hours after the poison was swallowed, the symptoms began to abate, and gradually the patient fell into a sound sleep. Two hours later he awoke more calm, and complaining of headache. Next day he was quite restored to his usual state. The author calls special attention to three points: the predisposition of the person taking the drug; the dose; and the age of the preparation. In regard to the first point, the patient was a very excitable subject, and for many years had suffered from hypochondriasis. It might, therefore, be supposed that he would be very susceptible to the action of the drug. Touching the dose, not only was the quantity remarkably large, but it was prescribed by a medical man whom the patient consulted. In regard to the age of the drug, Sigmund is cited to the effect that the older the preparation of cannabis Indica is, the stronger it is. The preparation used in the present instance was several years old.

2446. *Giacomelli on a Ptomaine resembling Picrotoxin.*—In the stomach and liquid contained therein, in the liver, spleen, kidney, heart, and lungs, Professor Giacomelli found a ptomaine closely resembling picrotoxin in most of its characters (*Lo Sperimentale*, October 1883). The process employed was that of Otto, except that the liquids were evaporated *in vacuo*. The substance had the following points in common with picrotoxin 1. It passed into ether from a watery acid solution. 2. It crystallised in needles with stellate grouping. 3. It was soluble in warm glacial acetic acid, crystallising on cooling. 4. It behaved like picrotoxin when treated with the following reagents, (*a*) nitric acid and soda; (*b*) caustic soda; (*c*) acetate of copper and soda; (*d*) picric acid and soda; (*e*) nitrate of silver and ammonia. It did not, however, give any reaction with the neutral acetate of copper, which gives a black precipitate with picrotoxin. Nor had it the same physiological action on frogs.

WILLIAM R. HUGGARD, M.D.

2447. *Smidovitch on a Case of Belladonna Poisoning.*—Dr. Smidovitch (*Proceedings of the Tula Medical Society*, 1882) reports the case of a patient with an excoriated and swollen scrotum, who, following a physician's advice, rubbed in the affected parts an ointment consisting of one drachm of belladonna, three drachms of almond-oil, and one ounce of ceratum plumbi. The whole amount was used in two days. By the evening of the first day, there appeared general weakness and giddiness; and twenty-four hours later, dryness of the mouth and throat, difficulty in swallowing and speaking, delirium, and sleeplessness; the pupils were greatly dilated, and almost immobile; the soft palate was studded with minute ecchymoses. Under the administration of bromide of potassium, the patient recovered by the third day. V. IDELSON, M.D.

2448. *Kennedy on Poisoning by Red Precipitate.*—Dr. Kennedy, in the *Brit. Med. Jour.*, Jan. 1884, p. 56, reports the case of a woman who swallowed about two drachms of red precipitate. Emetics were given at first; then raw eggs and magnesia in milk. The symptoms complained of were pains over the whole abdomen. There was hæmatemesis, together with passage of florid blood *per anum*, on the second day; after this the discomfort gradually subsided, and in five days the patient was convalescent.

2449. *Broadbent on Alcoholic Poisoning.*—Dr. Broadbent, in the *Brit. Med. Jour.*, Feb. 1884, p. 358, records a case of alcoholic poisoning in a gentleman aged 42. In 1875 he was placed under the care of a medical man as a dipsomaniac. He had never had pronounced delirium tremens, but, for some months before his final illness, had failed in mental power. Dr. Broadbent saw the patient in April 1883. At this time the paralysis was chiefly manifest in the extensors of the forearm, giving rise to double wrist-drop; the flexors were also weak, and the muscles of the trunk enfeebled; though the legs could be moved in bed, the patient could not stand alone. The knee-jerk was lost, the sole-reflex marked; sensation was unimpaired; the sphincters were not affected. A special peculiarity was the pale, puffy, purplish condition of the hands, while the feet, when hanging down, could be seen to swell. Eight days after the author first saw the patient, death took place from asphyxia, there being obvious paralysis of the diaphragm. The spinal cord was examined *post mortem*, but nothing could be found on microscopic examination; it appeared remarkably pale, and of normal consistence.

RICHARD NEALE, M.D.

2450. *Debierre on Poisoning by Bonjean's Ergotine.*—A woman, aged 25, who was in the habit of taking ergotine against attacks of hæmoptysis, occurring at the time of the catamenia, swallowed on one occasion about 6 grammes of the drug. The hæmoptysis was arrested, but the menstrual flow continued, though diminished in quantity. After a few hours, symptoms of poisoning supervened which are thus described by the author (*Bull. Gén. de Thérap.*, January 1884). The patient was seized with intense dyspnœa, and had a fainting fit; when she recovered her consciousness, she complained of dryness of the mouth and throat, giddiness, noises in the ears, and dimness of sight; she had a sensation of tingling and coldness in the limbs, and, after a short time, there was complete anæsthesia of the whole cutaneous surface and of the tongue; deep pressure could, however, be felt. The quantity of urine was not increased. Three hours after the onset of the symptoms, epileptiform convulsions supervened, accompanied by severe pain in the chest, epigastrium, and abdomen. The temperature in the axilla was 36° Cent. (96°·8 Fahr.), pulse 50, respirations 50. Dr. Debierre then prescribed subcutaneous injections and inhalations of ether, and large quantities of coffee and chloral internally. The patient soon felt much relieved, and the amelioration was maintained during the next day. On the third day, the convulsions reappeared, but they ceased after an injection of ether. On the fourth day the patient was nearly well, and she soon entirely recovered.

2451. *Layet on Vanillism.*—The author gives in the *Revue Sanitaire de Bordeaux*, Feb. 1884, the result of his researches on some accidents caused by the manipulation of vanilla. In the Bordeaux ware-

houses the pods are unpacked, brushed, and put in boxes; in the distilleries, they are cut in small pieces for the fabrication of various liqueurs. It has been found that the workmen exposed to the dust and emanations of vanilla are liable to papular eruptions on the face and arms, accompanied by much itching and swelling, and followed by desquamation. Coryza and conjunctivitis are frequent. In other cases, the chief symptoms are anæmia, headache, giddiness, irritability of the bladder, nervousness, and sexual excitement.

2452. *Faucon and Debierre on Subcutaneous Injections of Chloral in Poisoning by Strychnia.*—In a very serious case of poisoning by strychnia, the authors (*Revue de Thérap.*, Feb. 1884) saved their patient by means of 120 subcutaneous injections of chloral. The total dose of chloral thus administered in fifty-nine hours was 58 grammes (nearly 15 drachms). Besides this drug, MM. Faucon and Debierre recommend emetics (such as ipecacuanha or tartar emetic) and large doses of coffee. Tannin and iodine may also be given with advantage.

J. S. Kaeser, M.D.

2453. *Ludwig and Mauthner on Suspected Arsenical Poisoning.*—In the *Wiener Med. Blätter* for Jan. 3, 10, and 17, an account is given by Prof. Ludwig and Dr. Mauthner of a somewhat remarkable case, forensically, of suspected arsenical poisoning. The body of a girl of 18, who had lived at Tenje, in Slavonia, was found floating in a canal near her home on July 19, 1882. The girl was known to have been about three months pregnant, and her lover accused the people in whose house she had last been seen of having caused her death. A necropsy was made, which showed that the body had entered the water during life; but as the representations of her friends were strong, and as the water in the canal was only 4 feet deep, an exhumation of the body, with a view to chemical examination, was ordered on Aug. 12. A very small amount of the internal organs was removed, only 23 grammes in all, made up, with the addition of some pieces of skin and hair, to a total weight of 70 grammes (nearly 2½ ounces). The quantity was so small that the whole of the materials had to be tested together, and distinct traces of arsenic were found, although quantitative analysis was impossible. In consequence of this uncertainty, another exhumation was ordered, and was carried out in May 1883, when large portions of the different organs were secured, as well as pieces of skin and hair, pieces of the dress of the deceased, of a garland of artificial flowers in the coffin, of the coffin planks, and of the earth of the grave. No arsenic was detected in the skin or muscular tissue; traces, too small to weigh, were found in the viscera and the hair, and large quantities in the artificial flowers and coloured silk cloths which had been placed in the coffin; also traces in the earth of the grave, but none in the coffin planks, nor in the earth from other parts of the graveyard. The source of the arsenic was therefore apparent; but the case shows what serious mistakes may arise from an insufficient quantity of the suspected matters being taken, and from the neglect of the other contents of the coffin.

2454. *Behring on the Treatment of Poisoning by Iodoform.*—Dr. Behring, of Winzig, writes to the *Deutsche Med. Wochensch.* of Jan. 31 on the treatment of poisoning by iodoform. As it has been found by experiments on animals that iodoform acts by withdrawing from the body its alkaline constituents, and leaving it poor in ash, he experimented with rabbits, and found that one set to which iodoform was given in combination with alkalies, survived a much larger dose than that which sufficed to kill another set to which the alkali was not given. In November 1883 he had an opportunity of putting his treatment into practice on a patient, aged 58, who had had his head severely cut by a blow with a stick. The wound was dressed by being filled with iodoform and bandaged, and the dressings had been twice renewed when Dr. Behring was fetched by the inflictor of the blow, who feared that the old man was losing his reason. He was found in bed, but very restless, continually endeavouring to rise, having had a very bad night, with delirium, and attempts to escape. The wound was nearly healed, and only a trace of iodoform was visible on the salicylic wool with which it was covered. The temperature was under 37° C. (98°·5 F.), the pulse 104. Examination of the various organs showed nothing abnormal, but the urine gave a decided iodine reaction. The dressing was changed to boracic acid, and bicarbonate of potash was given freely by the mouth. The symptoms speedily improved, and in a week the wound was healed. Loss of appetite is one of the most dangerous symptoms of iodoform poisoning, as it prevents the loss of alkali from being made up by the food.

Alice Ker, M.D.

DISEASES OF THE THROAT AND NOSE.

RECENT PAPERS.

2455. Peisson.—The Treatment of Adenoid Vegetations in the Upper Part of the Pharynx. (*Bull. de Méd. Gén.*, Nov. 1883.)

2456. Fayseler.—Pharyngitis Sicca.

2457. Giraudeau.—Latent Cancer of the Thyroid Gland. (*Revue de Méd.*, Jan. 1884.)

2458. Lalesque.—The Escape of Liquid Food through the Wound of Tracheotomy. (*Jour. de Méd. de Bordeaux*, Aug. 1883.)

2459. Longuet.—On Nasal Cough. (*L'Union Médicale*, Jan. 22.)

2460. Cocks.—On Tracheotomy for Croup. (*Archives of Pediatrics*, Vol. i., No. 1.)

2461. Zambianchi, F.—On the Methodical Extirpation of Goître. (*Annali Univ. di Med. e Chir.*, Oct. 1883.)

2462. Roth.—The Treatment of Ozæna.—(*Centralbl. für die Ges. Therap.*, Feb. 1884.)

2463. Cohen.—A Rare Form of Chronic Laryngitis. (*Deutsche Med. Wochensch.*, Jan. 3.)

2464. Lomikovsky, M.—On the Treatment of Laryngitis and Morbus Pulmonum. (*Vratch*, 1882, No. 38, pp. 640–1.)

2465. Lomikovsky, M.—On Chronic Laryngitis from Singing. (*Vratch*, No. 35, p. 591, 1882.)

2466. Champneys.—Mediastinal Emphysema and Pneumothorax after Tracheotomy. (*Brit. Med. Jour.*, Dec. 1883, p. 1193.)

2467. Markoe.—The Diagnosis of Foreign Bodies in the Air-passages. (*New York Surgical Society.*)

Art. 2455. *Peisson on the Treatment of Adenoid Vegetations in the Upper Part of the Pharynx.*—There is in the upper part of the pharynx (*Bull. de Méd. Gén.*, November 1883) an accumulation of adenoid tissue which, when hypertrophied, may hinder the passage of air through the nares and cause deafness

by obstructing the opening of the Eustachian tubes; it also produces a naso-pharyngeal catarrh, which, like the other symptoms, can only be cured by local treatment. Some authors have advocated the use of nitrate of silver, and others the galvanic cautery, but the best plan is to remove entirely the hypertrophied pharyngeal tonsil. Special instruments have been devised for the purpose, such as Meyer's annular knife and Loewenberg's cutting forceps; Dr. Peisson recommends the double curette of Dr. Calmettes which can be used without a mirror.

2456. *Fayseler on Pharyngitis Sicca.*—This affection has been recently described in a dissertation by Dr. Fayseler, who states that the chief symptom is the dryness of the naso-pharyngeal mucous membrane which is covered by a varnish-like secretion. This form of pharyngitis is not dangerous, and can be cured pretty easily, but relapses are very frequent. Sometimes it is a symptom of anæmia, scrofulosis, albuminuria, or diabetes. The local treatment consists in inhalations of sulphurous water, or of a solution of chloride of zinc, 3 grammes to 300 grammes of water, 10 of aqua laurocerasi, and 100 of glycerine. After each inhalation the throat should be cleared of mucus, and either a solution of iodine or the tincture of capsicum with glycerine, 1 to 50, should be applied.

2457. *Giraudeau on Latent Cancer of the Thyroid Gland.*—An interesting case of this rare affection is reported by the author in the *Revue de Méd.* for Jan. 1884. A man, aged 61, was admitted into the hospital with symptoms of pleurisy on the right side. He was thin and weak, and complained chiefly of dyspnœa; the margin of the liver could be felt two inches below the false ribs. The temperature was 38°·4 C. (101°·1 F.) in the rectum, and the urine contained albumen. A slight hypertrophy of the thyroid gland was noticed, but there were no symptoms of compression of the trachea or œsophagus; the swelling was the seat of continuous but not severe pain; the skin over the tumour was freely movable, and no enlargement of the cervical lymphatic glands could be made out. Tapping of the chest became necessary, and about a pint of serous fluid, containing many red blood-corpuscles, was withdrawn. After a few days the patient died, and at the *post mortem* examination it was found that the place of the thyroid gland was occupied by a scirrhous tumour. Cancerous masses were found in the cervical lymphatic glands, and also in the right pleura, and in the liver and kidneys.

2458. *Lalesque on the Escape of Liquid Food through the Wound of Tracheotomy.*—In the *Jour. de Méd. de Bordeaux* for Aug. 1883, the author relates a case of tracheotomy in which alimentation by the mouth was made impossible during ten days by the escape of all fluids through the wound. This accident may be the result of a wound or ulceration of the œsophagus, but more often it is caused by paralysis or inco-ordination of the muscles of deglutition. Dr. Lalesque's patient seemed to inhale the fluids instead of swallowing them, and had to be fed for a time by enemata.

2459. *Longuet on Nasal Cough.*—The author has collected and published in the *Union Médicale* for Jan. 22 several cases of reflex cough or asthma due to irritation of the nasal mucous membrane. In many people, mechanical irritation of the mucous membrane covering the posterior part of the inferior turbinated bones and of the septum causes severe paroxysms of cough. Voltolini and others have noticed that a chronic inflammation of this region, which is supplied by the spheno-palatine and palatine nerves, may produce cough, asthma, and perhaps other symptoms dependent on reflex action. These symptoms disappear when the inflammation has been cured. When the mucous membrane is hypertrophied, the application of the thermo-cautery has a very beneficial action.

J. S. Kaeser, M.D.

2460. *Cocks on Tracheotomy for Croup.*—Dr. Cocks, of New York, relates (*Archives of Pediatrics*, Vol. i., No. 1.) his experience of fifteen cases, and his report is especially valuable because the operations, with one exception, were performed at the patients' homes, with no more skilled nursing than was afforded by the relatives. Eight out of the fifteen cases recovered; namely, five of the eleven boys, and three of the four girls. The average age of the successful cases was $4\frac{1}{4}$ years; of the unsuccessful, $3\frac{1}{7}$ years. The average duration of the dyspnœa was in each class of cases about thirty-seven hours. Chloroform, or, in one child, ether, was used in seven successful and six unsuccessful cases. Two of the patients died on the first day from the diphtheritic poison—the dyspnœa having been relieved. Two died on the second day—one from shock and one from inspirated mucus; two on the third day, and one on the fourth, from extension of the membrane below the tube. Dr. Cocks or his assistant remained with the patient from three to six hours after the operation, and during that time instructed the amateur nurse in the conduct of the case. The temperature of the room was maintained at from 75° to 80° Fahr.; a warm sponge was kept over the tube, and the steam-spray was almost constantly going, an occasional interval of a quarter of an hour only being allowed. The nurse was, further, directed to take out the inner tube every fifteen minutes, soak it in hot water, and pass a muslin rag through it; if the outer (fenestrated) tube became blocked up, a long feather moistened at the tip was passed down it. After the third day the outer tube was taken out twice daily and cleaned. As soon as respiration was carried on through the larynx a cork was placed in the orifice of the tube, but was directed to be taken out by the nurse, if required. The tube was finally removed on from the sixth to the tenth day. The tracheal opening was closed as early as possible by bringing the lips of the wound together with long strips of adhesive plaster. The subsequent treatment of the case consisted in the administration of iron and chlorate of potash, together with brandy and abundance of nourishment.

Ralph W. Leftwich, M.D.

2461. *Zambianchi on the Methodical Extirpation of Goître.*—Zambianchi reports (*Annali Univ. di Medicina e Chirurgia*, Oct. 1883) ten cases of successful extirpation of the thyroid gland by Professor Bottini. He is strongly in favour of the total removal of the thyroid, regarding it as the sole radical cure for goître. Referring to the opinions of Reverdin and Kocher, who find that extirpation of the thyroid body is followed by symptoms resembling those of myxœdema, he says that his observations so far do not support this view. Admitting that to the thyroid body belong the functions which Kocher attributes to it, its removal ought in all cases to give rise to equal morbid phenomena. But in none of Bottini's cases in which the subsequent history was known did these symptoms show themselves. On the contrary, the patient enjoyed excellent health both of body and

mind. In many cases of goître, the gland is so profoundly altered that even microscopically it has lost every trace of its original structure, and yet there is no anæmia or want of intelligence. It is difficult to understand why the organism should only feel the loss of the function of the thyroid gland when owing to the surgeon, and not when owing to disease. Among those operated on by Professor Bottini, for example, M. (Obs. 3), was most intelligent, though the gland was in a state of profound degeneration, and the same may be said of several of the others. Professor Bottini recommends the total removal of the gland; partial removal, if equally useful at the moment, always leaves the patient with the risk of the reappearance of the disease. In one of his two cases of partial extirpation this did happen, the patient returning in the following year with a fresh goître, which demanded the repetition of the operation. Kocher himself, Reverdin, and other surgeons, speak of numerous cases of relapse.

G. D'Arcy Adams, M.D.

2462. *Roth on the Treatment of Ozæna.*—The *Centralbl. für die Gesam. Therapie.* of Feb. 1884 contains an article on the treatment of ozæna, by Dr. Roth, of Vienna. He objects to the general use of the term as applied alike to all conditions which may cause the particular symptom, and he would use the name ozæna only for what he calls the genuine variety, characterised, not by any decay of the bones or soft parts, but by hyperæmia and hypertrophy of the mucous membrane, with increased quantity and diminished fluidity of the secretion, which rapidly dries, and hardens into cakes. The mucous membrane is often found in parts in a state of atrophy, which seems to be the secondary condition of the foregoing hypertrophy; and this atrophy may extend to the turbinated bones, which will then present no trace of their previous form or structure. The fœtor results from the access of germs to the secretion, as has been proved by experiment. When the anterior and posterior nares have both been stopped, so that no air has been permitted to enter, the fœtor has failed to appear, but has been detected after the secretion has been exposed to the air for some time, when micrococci and bacteria have been found in it in great numbers. The proper name for such an affection is rhinitis chronica atrophicans fœtida, and the indications of treatment are to loosen and remove the secretion, to restore the mucous membrane to its normal condition, to remove the odour, and to cure any prevailing dyscrasia. Dr. Roth effects those ends by means of plugs of cotton-wool, charged with iodoform, which he introduces into the nostrils at night, and removes in the morning. They act as a disinfectant, retain the secretion, and exercise salutary pressure on the mucous membrane, irritating it slightly, so that an increased quantity of blood is brought to it, and the secretion becomes more fluid. After the removal of the plug, the nasal cavities are washed out with a solution of thymol, carbolic acid, or chlorate of potash, combined with alum or tannin, by means of a special nasal spray, which conveys the fluid to the very back of the nose. Special causes must be removed according to their indications, but in the case of tuberculous affections the local treatment should be confined to disinfection, and reliance be placed chiefly on general dietetic measures. Dr. Roth concludes by remarking that only those cases which come under treatment in the early stages of hypertrophy are curable, but that, unfortunately, this obstinate and peculiarly objectionable complaint is generally first seen when atrophy has already begun, and when the treatment of the fœtor is all that can be hoped for, until the mucous membrane, with its glands, is completely destroyed.

2463. *Cohen on a Rare Form of Chronic Laryngitis.*—At the meeting of the Medical Society of Hamburg, on April 3, 1883 (*Deutsche Med. Wochensch.*, Jan. 3), Dr. Cohen spoke on a rare form of chronic laryngitis. His patient, a woman aged 55, was rather stout, and at the same time anæmic: there was no suspicion of syphilis. She had had an attack of hoarseness in childhood, following exposure to cold, but it was soon cured, and the patient had been in the habit of singing a great deal, until the birth of her first child in her 25th year. After this, any attempt at singing was followed by hoarseness, which did not yield to remedies, but had for the last thirty years come on every winter, rendering her absolutely aphonic during the first hours of the morning, and confining her to the house in north and east winds. There had also been a considerable amount of dyspnœa, especially in expiration, which continued until crusts were coughed up, and the symptoms became rather less severe. She came under Dr. Cohen's observation in September 1881, when he found paleness of the mucous membrane of the mouth and palate, the posterior pharyngeal wall presenting the appearances of pharyngitis sicca, with red glazed mucous membrane, and dried secretion in the centre. The laryngeal mucous membrane was reddened, and the vocal cords thickened, and the interior of the larynx was filled with dark green or even blackish crusts of hardened secretion, which adhered to the edges of the vocal chords, prevented them from completely closing, and at the same time considerably diminished the calibre of the opening. The crusts could be removed by moistening with water or oil, and then it could be seen that the same process extended down the trachea. Under the crusts there was no appearance of ulceration. The application of solution of nitrate of silver in the proportion of 1 to 5 caused relief for the remainder of the winter, various other remedies having previously been tried without result; but in the next cold weather the condition was as bad as before. After again trying the nitrate of silver, and finding that it caused much irritation, Dr. Cohen made a trial of lactic acid as an inhalation, using 15 drops, increased to 20, three times a day. Under this treatment the conditions rapidly improved, even in the first few days; the crusts were not formed again, and the voice, somewhat husky in the morning, became quite clear for the rest of the day, in spite of the inclement season.

Alice Ker, M.D.

2464. *Lomikovsky on the Treatment of Laryngitis connected with Broncho-pneumonia.*—In the *Vratch*, 1882, No. 38, p. 670, Dr. M. Lomikovsky, of Professor V. G. Lashkevitch's clinic in Charkov, states that, in the treatment of laryngitis in patients suffering from broncho-pneumonia, he obtains the best results from the use of astringent solutions (from 3 to 10 grains of sulphate of zinc or nitrate of silver to half an ounce of water) in the form of pulverisation, injection, or brushing. He regards brushing as a more efficient procedure than injection of solutions, or insufflation of powders. Keeping in view a high local sensibility present in the patients under consideration, the author advises to

make pulverisation not oftener than twice a day. To lessen the increased sensibility of the fauces and larynx, he successfully brushes the parts, once or twice daily, with the following mixture: ℞ Potassii bromidi ʒj., zinci sulphatisi gr. iij., codeini gr. ij., glycerini et aquæ distill. āā ʒj. If intense pain on deglutition be present (from swelling and ulceration of the epiglottis), local painting with a weak solution of nitrate of silver may be advantageously used. To alleviate expectoration and to remove accumulation of sputa, the author recommends inhalation of bicarbonate of soda dissolved in camomile infusion or in mint-water.

V. IDELSON, M.D.

2466. *Champneys on Mediastinal Emphysema and Pneumothorax in Connection with Tracheotomy.*—At a meeting of the Royal Medical and Chirurgical Society (*Brit. Med. Jour.*, 1883, p. 1193) Dr. Money read a statement which formed an addendum to the third communication on artificial respiration by Dr. F. H. Champneys, published in the Society's *Transactions*, 1882, p. 75. Since the publication of this paper, Dr. Money stated that twenty-eight *post mortem* examinations had been made after tracheotomy. In all cases the examination was made under water. In sixteen cases, emphysema of the mediastinum was found; in two of these cases, pneumothorax was also found. It was found in no case without emphysema of the mediastinum. The amount of emphysema of the mediastinum was greatest when pneumothorax also existed. The experiments of Dr. Champneys led to the practical recommendations in tracheotomy: 1. to operate high up without dreading the hæmorrhage; 2. to refrain from stretching the neck backwards, as likely to favour the abnormal entry of air into the mediastinum. The dangerous time in the operation is between the division of the deep cervical fascia and the introduction of the tracheal tube.

RICHARD NEALE, M.D.

2467. *Markoe on the Diagnosis of Foreign Body in the Air-passages.*—In the course of a discussion on cases reported by Dr. Weir and Dr. Sands to the New York Surgical Society, on Oct. 9, 1883, Dr. T. M. Markoe, the president, alluded to one point in diagnosis which had interested him. In a case under his care, in which a shirt button had passed into the right bronchus, and which was extracted with the forceps after tracheotomy, a diagnosis was made as to the situation of the foreign body. In this instance the obstruction was manifestly in the two lower lobes of the right lung; the upper lobe being perfectly resonant and the respiratory murmur distinct. In the case that had been brought under his notice by Dr. Weir, the position of the foreign body was determined by the fact that the whole left side showed absence of respiratory murmur. In the right bronchus, the bronchial branch which goes to the upper lobe, sometimes comes off very near to the bifurcation, and there is a considerable interval between this point and the seat of the next division. It is between the first branch and the second point of division of the bronchus that the foreign body lodges when it enters the right bronchus. When a foreign body enters the left bronchus, there is no branch until the tube breaks up into its final divisions, nearly two inches from the trachea; and, therefore, when this left bronchus is obstructed, all entrance of air is excluded from the whole of the left lung.

W. JOHNSON SMITH.

DISEASES OF CHILDREN.

RECENT PAPERS.

2468. HUTCHINSON.—Injuries to the Elbow-joint in Children. (*Med. Times and Gazette*, Jan. 1884, p. 1.)

2469. MURRAY.—Death from Asphyxia in an Infant. (*Lancet*, Jan. 1884, p. 147)

2470. ASHBY.—Sore Throat in Children. (*Practitioner*, Dec. 1883.)

2471. Albumen in the Diet of Children. (*Centralbl. für die Med. Wiss.*, 1883, No. 45.)

2472. BOUCHUT.—Inflammation of the Navel in Newborn Children. (*Paris Médical*, Feb. 1884.)

2473. HENOCH.—Nephritis after Varicella. (*Wiener Med. Blätter*, Jan. 17.)

ART. 2468. *Hutchinson on Injuries to the Elbow-joint in Children.*—Mr. Jonathan Hutchinson, in the *Med. Times and Gazette*, Jan. 1884, p. 1, contributes a lecture on 'Injuries to the Elbow-joint in Children.' The author commences by stating that the elbow is almost the only joint which in children is liable to be dislocated from violence, and that many of the cases of so-called dislocation at the elbow-joint are complicated cases, there usually being a partial detachment of the lower epiphysis of the humerus. The ossification of the lower end of the humerus occurs at several separate points; one portion may be detached alone, but the whole epiphysis may be cleanly separated from the shaft by a transverse line, thus permitting the condyles and epicondyles to pass backwards together with the bones of the forearm. Partial separations of the epiphysis are more common than complete ones, and are difficult to cure. The elbow remains in many cases stiff. The restriction of movement in cases of injury in children is due to the fact that the periosteum is often stripped up, and this leads to extensive deposit of new bone. Two cases are cited; one illustrates the peculiar formation of lumps of bone met with in many cases, and the great difficulty one has in finding out whence they have been detached; the other is the case of a peculiar displacement of the inner epicondyle. In conclusion, a few practical rules are laid down; one being that the epiphyses are the weakest parts, and must be carefully examined in all injuries of the elbow, and that the diagnosis should be guarded, and never given before the case has been examined under chloroform, if there be the least doubt as to its real nature.

2469. *Murray on Death from Asphyxia in an Infant.*—Mr. Murray, in the *Lancet*, Jan. 1884, p. 147, reports the following case. A dead infant was

brought to him by its mother. The child was one of twins seven months old. Two hours previously the mother had suckled it, and laid it down on the bed asleep, apparently quite well. The child had never suffered from fits or any disease. It was poorly nourished and feeble. On *post mortem* examination, a quantity of coagulated milk was found lodged round the orifice of the glottis ; and, upon opening the trachea, milk was found extending as far down as the bifurcation. The œsophagus also showed the presence of milk, thus proving that during life some of the milk must have regurgitated from the stomach into the mouth, and trickled back into the larynx, thus causing death through suffocation.

2470. *Ashby on Sore Throat in Children.*—Dr. Ashby, in the *Practitioner*, Dec. 1883, contributes an able article on the necessity of examining the fauces in children suffering from the different acute specific fevers. The more important forms of inflammation of the throat in children are classified under four heads—1, simple catarrhal tonsillitis ; 2, scarlatinal tonsillitis ; 3, pseudo-diphtheritic tonsillitis ; 4, diphtheria. In diphtheria, the characteristic appearances are usually well marked about the pharynx, but there are some points which aid one greatly in deciding whether the attack is diphtheria or not. Amongst these a swelling of the cervical glands with cellulitis, or perhaps a fœtid discharge from the nose, is a point strongly in favour of diphtheria. Again, the pulse is weak, the temperature is not high as a rule, the urine is loaded with albumen, and there is no rash to make one confound the attack with scarlatina. In diphtheria the onset is insidious, in scarlet fever it is sudden, and is nearly always accompanied by vomiting, often by diarrhœa. In simple catarrhal tonsillitis the onset is sudden, and the temperature rises the first evening to about 103°, the tonsils are equally swollen, and in a few hours yellow spots make their appearance, owing to the retention of the secretion in the crypts. There is no true ulceration of the tonsils, nor sloughing of the soft palate, nor cellulitis around the cervical glands. The pseudo-diphtheritic form often resembles true diphtheria very closely, but the cervical glands are not swollen, and there is no albumen in the urine.

Richard Neale, M.D.

2471. *Albumen in Diet of Children.*—In the *Centralbl. für die Med. Wiss.*, No. 45, are tabulated the results of Cammerer, Uffelmann, and Hasse, upon the amount of albumen required in the diet of children ; and it is very interesting to find that these observers are almost unanimous on this point, since all three give almost the same figures. The average daily amount for each kilogramme of body-weight is, at two years, four grammes ; at three to five years, three and a half grammes ; and at eight to eleven years, two grammes and a half nearly. The average weight of a child at two years being twelve and a half kilogrammes, the daily amount of albumen required will be a little over 1½ ounce (784 grains) ; and the average weight at eight years being 24 kilogrammes, such a child will require a little over 2 ounces daily. The albuminous constituents of the food, when a diet is prescribed for children, must be estimated according to the body-weight. With young children, the albumen is chiefly from the animal kingdom ; in older children, a great part is of vegetable origin. The need for carbo-hydrates is satisfied in older children by bread chiefly, in younger children by sugar.

E. J. Edwardes, M.D.

2472. *Bouchut on Inflammation of the Navel in New-born Children.*—In the *Paris Médical* (Feb. 1884) the author states that omphalitis generally begins during the first days after birth, and may present very different degrees of severity, from a slight redness of the skin, with discharge from the navel, to a phlegmonous erysipelas, followed by suppurative phlebitis and peritonitis. In other cases, gangrene and profuse suppuration of the navel take place, sometimes accompanied by hæmorrhages and bullous eruptions. The inflammation often spreads to the liver, producing icterus, hepatitis, and sometimes pyæmia. Bouchut ascribes to a slight inflammation of the umbilical vein the icterus of new-born children ; the grave form of phlebitis occurs generally during epidemics of puerperal fever.

J. S. Kaeser, M.D.

2473. *Henoch on Nephritis after Varicella.*—Professor Henoch was consulted in the spring of 1883 in the case of a boy, aged 10, who was suffering from slight nephritis (*Wiener Med. Blätter*, Jan. 17). All possibility of his having had scarlatina was decidedly excluded, but he had been recently treated for varicella, the traces of which were still visible. Professor Henoch considered the varicella to be sufficient to account for the nephritis, especially as he had recently seen nephritis follow cases of varicella occurring, one after syphilis, one following typhoid fever, and one occurring in the course of eczema faciei and prolapsus ani.

Alice Ker, M.D.

ANATOMY.

RECENT PAPERS.

2474. Podvysotzky, Vl.—On the Minute Structure of the Pancreas. (*Kieff Inaugural Dissertation*, 1882 ; and *Veterinarnyi Vestnik*, 1882, Fasc. iii., iv., and v., p. 43–49.)

2475. Richardson.—Anatomical Injections of the Blood-vessels through the Cranio-spinal Cavity. (*Asclepiad*, Jan. 1884.)

Art. 2474. *Podvysotzky on the Minute Structure of the Pancreas.*—Dr. Vl. Podvysotzky (*Kieff Inaugural Dissertation*, 1882 ; and *Veterinarnyi Vestnik*, 1882, Fasc. iii., iv., and v.), who has worked in the histological laboratory of Prof. P. J. Peremejko, of Kieff, sums up the results of his careful investigations as follows. 1. The secretory cells consist of two zones, a peripheric one possessing all the properties of albuminoid substances, and a central or granular one. Heidenhain's observation, according to which the thickness of these zones depends on the stages of the digestion, is fully confirmed by experimental evidence. 2. The granules of the central zone have not the characters belonging to true proteid bodies, and do not present anything similar to common protoplasmatic granularity. Their presence within a cell is a manifestation of the ferment-creating activity. These granules may be regarded as a material substratum of pancreatinic zymogen. 3. The granules are absent in the lumina of the acini, and in the ducts and secretion. 4. Ebner's intralobular or intercellular reticulum does not exist during life. The secretory cells are surrounded by interstitial substance, which is fluid during life, and, when acted upon by chromic

acid, becomes swollen and solidified, and may be then isolated in the shape of homogeneous fine lamellæ and trabeculæ. Glycerine dissolves the substance; hence, after treatment of the pancreas by glycerine, there are no interstitial trabeculæ to be found. 5. The interstitial fissures have a share in the glandular secretion; it is highly probable that they present beds, along which the water, exuding from the capillaries and containing dissolved albumen and salts, runs into the lumen of the lobule. 6. On the surface of the acini there is situated a layer of peculiar connective-tissue cells which anastomose with each other and give numerous wedge-shaped lamelliform processes penetrating into the intercellular fissures. These elements are called by the author 'cuneiform cells' (Keilzellen). Most likely they are connected with the beginnings of lymphatic vessels in the gland. 7. The processes of the cells in the centre of the acini have also the shape of very fine lamellæ, which penetrate from the lumen of the acinus into the interstitial fissures. The multipolar cells in the centre of the acini as well as the cuneiform cells, are metamorphosed bipolar, spindle-shaped, cellular elements of the finer ducts. All the cells named have more of the nature of connective tissue than of epithelium. 8. The central parts of the interstitial fissures, limited by the point up to which the processes of the central cells in the acini reach, are to be regarded as the beginnings of the ducts. Thus the ducts of the pancreas do not begin in the shape of secretory canaliculi or capillaries, but in the form of simple intercellular fissures (which in the injected preparations may simulate very fine canaliculi). 9. The membrana propria is not homogeneous structureless, but presents a very narrow meshed and fine network of connective tissue, the fibrils of which are directly connected with thicker fibres of the interlobular connective tissue. 10. The membrana propria does not contain any cells or visible nuclei. 11. In the parenchyma of the gland there are scattered aggregations of peculiar cells, bearing a close resemblance to lymphatic follicles. In reality, however, these cells have nothing in common with lymphoid elements. Their significance remains as yet unknown. The author proposes to name them 'pseudo-follicles.'

V. IDELSON, M.D.

2475. *Richardson on Anatomical Injection of the Blood-vessels through the Cranio-spinal Cavity.*—Dr. B. W. Richardson, in the *Asclepiad* for Jan. 1884, describes how, in conducting researches on the best modes of restoring animation after sudden dissolution from chloroform, &c., he discovered by accident that he was able to inject the inferior vena cava and iliac veins through the cranio-spinal cavity. One of the experiments is thus described. A rabbit was allowed to sleep to death in narcotic vapour; the abdomen was laid open, and the inferior vena cava exposed, full of blood. A hypodermic needle was then inserted into the cranial cavity from behind the eyeball through the optic foramen; by means of a small syringe, a drachm of mercury was injected through the needle. The mercury immediately appeared in the iliac veins and lower part of the inferior cava. Up to the present time the author has been unable to discover how, from the cranio-spinal cavity, the injected matter enters the veins so easily. Meantime, from what has been observed, we learn that the chief point of exit for gases and fluids in the cranio-spinal canal is by the veins of the canal, into the branches communicating with the inferior cava at its lowest part. The fact has many practical bearings, inasmuch as it leads to the almost certain inference that the cerebro-spinal fluid, which is always being secreted, finds its return-current into the venous circulation in a similar manner, and that the spinal cord and brain are thus relieved of pressure from it.

RICHARD NEALE, M.D.

SYPHILOGRAPHY.

RECENT PAPERS.

2476. KLINK.—On Naphthalin in the Treatment of Venereal Ulcers. (*Gazeta Lekarska*, 1883, Nos. 7 and 8.)

2477. DOMANSKI, S.—A Contribution to the Study of Syphilitic Disease of the Brain. (*Gazeta Lekarska*, and *Vestnik Klin. ee Sudeb. Psychiatriee*, 1883, Vol. i., p. 270.)

2448. AUBERT.—The Inoculation of Chancrous Pus. (*Lyon Médical*, Feb. 1884.)

ART. 2476. *Klink on Naphthalin in Venereal Ulcers.*—In the *Gazeta Lekarska*, Nos. 7 and 8, 1883, Dr. Klink states his experience of the treatment of venereal ulcers by naphthalin. He used the drug in 360 cases of chancre, in 20 of which the ulcers were situated on the mucous membrane of the vagina and intravaginal portion of the womb; in 12, in the female urethra; in 40, in the female anus; the remaining being cases of cutaneous chancre in both sexes. In the majority of the cases there was present a considerable tendency to destructive processes, as shown by the occurrence of phagedæna, gangrene, or extensive disintegration of tissues. Under the use of naphthalin, in many cases as early as the third day, in none later than the eighteenth, all inflammatory phenomena disappeared, ulcerated surfaces were free from detritus, healthy granulations sprang up, and then very rapid healing followed. Naphthalin failed only in a few cases, cured subsequently by iodoform. From all his observations, the author is led to believe that naphthalin, as a remedy for chancre, is nearly as efficient as iodoform, and is preferable to the latter in pauper and in hospital practice. The author applied the drug either in powder (*naphthalinum albissimum*), or in an ethereal solution (from two scruples to a drachm of the drug to half an ounce of ether).

2477. *Domanski on Syphilitic Disease of the Brain.*—Dr. Stanislaw Domanski (*Gazeta Lekarska*, and *Vestnik Klin. ee Sudeb. Psychiatriee*, 1883, Vol. i.) says that giddiness, complete or incomplete loss of consciousness, aphasia of various kinds, and epileptoid and apoplectoid paroxysms, as they are observed in cases of syphilitic disease of the brain, have for their immediate cause a true arterial anæmia of the cerebral substance. This anæmia is produced mainly by the well-known changes in arteries, which lead to constriction of the latter. To support his hypothesis the author, having alluded to the facts supplied by morbid anatomy, calls attention to (1) the aggravation of the symptoms in the sitting or the standing posture, and their amelioration when the recumbent position is assumed; (2) the harmful influence of all remedies which diminish supply of blood to the brain (cold lotions, strong purgatives, &c.); and (3) the beneficial effects of all remedies which strengthen the action of the heart (alcohol,

ether, &c.). Accordingly, the author recommends brandy, old wine, strong *vodka* (*eau-de-vie*), and ether, as the best remedies in the symptomatic treatment of temporary disturbances of the cerebral circulation in syphilitic cases. V. Idelson, M.D.

2478. *Aubert on the Inoculation of Chancrous Pus.*—The author's experiments, as reported by the *Lyon Médical* for Feb. 1884, have been made with chancrous pus diluted with water in equal parts, or mixed with its weight of the following fluids : solution of nitrate of silver (1 in 50), pyrogallic acid (3 in 100), carbolic acid (3 in 100), Van Swieten's solution of perchloride of mercury, alcohol, and glycerine. The fluid was sealed up in vaccine tubes, and was inoculated after twenty-fours. It was found that the pus remained active when mixed with water or glycerine, but not when diluted with any of the other liquids. It is interesting to note that glycerine, which acts under certain circumstances as an antiseptic agent, does not destroy the activity of chancrous pus and of vaccine lymph. J. S. Kaeser, M.D.

OTOLOGY.

RECENT PAPERS.

2479. Roth.—A New Treatment for Tinnitus Aurium. (*Brit. Med. Jour.*, Dec. 1883, p. 1189.)

2480. Griffith. — Perforation of the Tympanum. (*Ibid.*, Dec. 1883, p. 1189.)

2481. Mercié.—Treatment of Stricture of the Eustachian Tube by Electrolysis. (*Gaz. des Hôpitaux*, No. 31, 1884.)

2482. Baratoux.—The Treatment of Granulations in the Middle Ear and External Auditory Meatus. (*Revue de Thérap.*, Feb. 1884.)

Art. 2479. *Roth on a New Treatment for Tinnitus Aurium.*—Mr. Bernard Roth, in the *Brit. Med. Jour.*, Dec. 1883, p. 1189, records the case of a lady, aged 57, who suffered from tinnitus aurium for a period of four years. Mr. Roth was induced to try Dr. Mortimer Granville's treatment of 'nerve-vibration.' The blunt ivory disc of the percuteur was applied over the forehead, and in five minutes the patient experienced more relief than she had done for years. After seven applications, the patient was so pleased with the treatment that she decided to procure a percuteur for herself, and applied it to her forehead late at night.

2480. *Griffith on Perforation of the Tympanum.*—Mr. T. N. Griffith, in the *Brit. Med. Jour.*, Dec. 1883, p. 1189, mentions a simple and efficacious means of supplying the great want occasioned by perforated tympanum. This is simply to drop into the ear three or four drops of castor-oil. The viscidity of the oil is sufficient in many cases to keep it in its place often for a whole day, or as long as the upright position is maintained.

Richard Neale, M.D.

2481. *Mercié on the Treatment of Stricture of the Eustachian Tube by Electrolysis.*—This method of treatment, which is described in the *Gaz. des Hôpitaux* (No. 31, 1884), consists in passing through the Eustachian catheter as far as the stricture a flexible bougie made of silver wire and connected with the negative pole of a battery of two or three Chardin's elements. A small silver ball is then introduced into the external auditory meatus, nearly as far as the tympanic membrane, and connected with the positive pole of the battery. The operation does not last more than two minutes, and is said to give very good results.

2482. *Baratoux on the Treatment of Granulations in the Middle Ear and External Meatus.*—The *Revue de Thérap.* for Feb. 1884 contains an enumeration of the most successful modes of treatment. Nitrate of silver and chloride of zinc are recommended by some. Perchloride of iron causes less pain, but must not be used when there are ulcerations, as caries may then follow its application. Warm alcohol and a saturated solution of boracic acid in alcohol may be used with advantage in many cases. For the rapid destruction of granulations, no instrument is better than the galvanic cautery, but several sittings are generally necessary.

J. S. Kaeser, M.D.

REVIEWS.

Article 2483.

Vorlesungen über Pharmakologie für Aerzte und Studirende. Von Prof. Dr. C. Binz. Bonn.

These lectures, of which the present volume is the first instalment, are to be completed in three parts.

Prof. Binz opens with the small group of the anæsthetics. The first of these described is *ether*. Under its administration, the pale corpuscles of the blood are said to increase. To stimulate the failing cardiac activity occasionally manifested in fevers, Zülzer has injected it subcutaneously with great advantage in combination with liquor ammoniæ anisatus ; and Bayr strongly recommends similar subcutaneous injections in cases of collapse or shock after severe operations, &c.

After a particularly interesting chapter on *chloroform*, there follows a very able review of the varied action and uses of *opium and its alkaloids*. The action of *morphia* on the different organs of the body, as the spinal cord, heart, and vessels, is given clearly and concisely, and the consequent slowing of the peristalsis of the intestine is shown to be effected through the splanchnic nerve. The secretions are more or less influenced under its administration ; thus, Rossbach has demonstrated that, in the case of the mucous membrane lining the trachea, the mucous secretion is diminished nearly to one-fifth of its normal amount ; the effect, which, however, is but temporary, beginning to show itself about fifteen minutes after the subcutaneous injection of the drug. On the other hand, the sweat-glands are stimulated to increased activity. Up to 1878 seventeen alkaloids had been found in opium, but contained in it in very variable amounts ; narcotin ($C_{22}H_{23}NO_7$) may form as much as 10 per cent., and closely associated with it is thebain ($C_{19}H_{21}NO_3$) ; others of these alkaloids are codein ($C_{18}H_{21}NO_3 + H_2O$), narcein, papaverin, and porphyroxin. Codein, when injected into a frog, soon induces general muscular cramp ; but, to produce the hypnotic action with codein, from six to eight times as much must be administered as of morphia. Schröder states that, while the presence of codein, papaverin, narcotin, and thebain in opium impart to it a cramp-producing power, the narcotic action of the morphia is thereby impaired.

Dr. Binz mentions the advantages he found attending the practice of subcutaneous injections of morphia in the case of wounded men removed from the

battle-field, as this rendered their transport much more bearable.

After a protracted administration of morphia, a body makes its appearance in the organism corresponding in its reactions with oxydimorphin, a substance that, Polstorff states, is readily formed when an alkaline watery solution of the hydrochlorate is exposed to the air. This oxydimorphin, however, does not act on animals as a narcotic, but, when injected in the form of the easily soluble hydrochlorate, tends to produce asphyxia, even in small doses ; and it is probable that in chronic poisoning by morphia this is one of the products formed which acts deleteriously on the tissue-cells. A further oxidation-product may also be formed, oxymorphin [$2C_{17}H_{19}NO_3$ (morphia) + O = $C_{34}H_{36}N_2O_6$ (oxydimorphin) + H_2O ; and $C_{34}H_{36}N_2O_6$ + O + H_2O = $2C_{17}H_{19}NO_4$ (oxymorphin)].

Morphia is one of the most frequent of the causes of death by poisoning, constituting at least three-fourths of all such deaths in children under three years old. In the diagnosis of opium-poisoning, pointed reference is made to the strongly marked myosis, the sinking of the blood-pressure, and the slowing of the pulse ; and also to the appearance of a characteristic brownish precipitate, when some of the urine of the patient is drawn off and tested with a drop of sulphuric acid and ten drops of a concentrated solution of iodine in some potassic iodide and water.

The marked effect of warmth in tending to prevent death in poisoning by opium as well as by chloral is pointed out, as also the utility of repeated immersion of the body of the patient in a warm bath, and the simultaneous application of cold water to the head ; likewise the benefits to be derived from artificial respiration and stimulation of the central nervous system, by the administration of strong infusions of tea or coffee, as well as by injections of atropin. The atropin acts by preventing the inhibitory action of the vagus upon the heart. In the case of a dog under the influence of morphia, the pulsations fell to 52 in the minute, but rose again to 108 after the injection of atropin ; the blood-pressure at the same time gradually rising, the heart's action becoming regular, and the cyanosis disappearing. Even in patients upon whom the cold douche, artificial respiration, galvanism, and stimulation of every kind are without avail, the subcutaneous injection of 15 to 30 milligrammes of atropin will soon bring about an enlargement of the pin-hole pupils, a quiet instead of a stertorous breathing, and a strengthening of the pulse ; and the patient, after a good healthy sleep, may awake to full consciousness.

In poisoning by *chloral*, Levinstein has obtained marked results from the use of strychnine. In a man, aged 25, who had taken 24 grammes of chloral-hydrate, and upon whom faradisation of the phrenic had only a transitory effect, the cardiac pulsations were increased, and the temperature raised by the subcutaneous injection of 0·003 gramme of strychnine ; and the subsequent injection of an additional 0·002 gramme effectually restored the cardiac activity. Although the narcosis continued the following day, yet with occasional artificial respiration the patient recovered. Chloral depresses the vaso-motor centre in the brain, while strychnine stimulates it ; by the former, the arteries are widened and the blood-pressure lowered ; by the latter, the arteries narrowed and the blood-pressure raised. In chloral narcosis also, the excitability of the respiratory centre is depressed, while it is strongly stimulated by strychnine. Husemann and Kröger specially recommend atropin in chloral-poisoning, on account of the marked effect it has in improving the respiration.

The great superiority of *potassic bromide* as a nerve-sedative is next insisted upon, and Dr. Bertelsmann's mode of administering it for the cure of epilepsy given in detail. The homology of a comparatively new body, *piperidin* ($C_5H_{11}N$), to conium is next referred to. This body paralyses the peripheral sensory nerves, and diminishes or removes many of the reflex actions—such as patellar reflex, &c.; it also exerts a somewhat similar influence on the heart and respiration through its paralysing action upon the vagus. In subcutaneous injections (0·02 gramme) it has been successfully used in the treatment of vaginismus.

Curara is closely allied to conium. Its paralysing action on the nerve-endings is discussed, and a case of poisoning by it given, in which the secretion of the tears, sweat, nasal mucus, and urine was greatly increased, sugar also appearing in the urine. When given by the stomach, it is so rapidly excreted by the kidneys that no evil effects are produced ; but, if the urine be injected into another animal, paralysis of the latter is speedily induced. In trismus and tetanus it has been employed with a fair amount of success, and also in hydrophobia.

In peripheral neuralgia, subcutaneous injections of *aconite* are to be recommended in doses of a tenth of a milligramme. Cases of trigeminal neuralgia which have resisted peripheral resection have been successfully treated by injections of 0·005 gramme of this alkaloid. Atropin and aconite are antidotes one of the other.

Pure *veratrin* has the formula $C_{32}H_{49}NO_9$; but commercial veratrin is seldom pure, consisting generally of a mixture in which two other alkaloids, cevadillin and cevadin, are present. The rhizome of the veratrum album and veratrum viride does not contain veratrin, but two other alkaloids, jervin ($C_{30}H_{46}N_2O_3$) and veratroidin ($C_{24}H_{37}NO_7$) are present. The respiratory centre is first stimulated by veratrin and then paralysed. As an antipyretic, it also possesses great power. On account of its very poisonous properties, it is advisable always to begin with doses as small as 0·001 gramme.

Contained in colchicum autumnale is *colchicin* ($C_{17}H_{19}NO_5$). This alkaloid has frequently led to poisonous symptoms in children, and has been proved, in the case of animals, to be a slow but powerful poison. Particularly in combination with opium, it has been much used in gout and chronic rheumatism.

The action of *amyl nitrite* is given fully and clearly—the quickening of the pulse, the increased frequency and depth of the respirations, followed in large doses by the dilatation of the arteries, particularly of the head, this paralysis of the arterial walls appearing to be independent of the vaso-motor centre in the medulla. Reference is also made to its employment in removing cramps of the vessels, in angina pectoris, and in epileptic attacks, in migraine, melancholia, anæmia of the brain, eclampsia of parturition, and syncope during the administration of chloroform, and in attacks of fainting, sea-sickness, &c. It is possible to induce diabetes by injecting this reagent under the skin of animals, and methæmoglobin is then said to accumulate in the blood.

Sodic nitrite has likewise been employed in epilepsy and angina pectoris ; and in the same diseases *nitroglycerine* has also been used, as well as in the asthma of emphysema and in chorea.

A common depressing action on the central nervous system is possessed by *iodoform*, *chloroform*, *salts of bromine*, and *nitrous oxide*, possibly due to their halogen elements set free after their entrance into the organism, as has been proved in the case of iodoform. Bromides also, we know, are readily decomposed by carbonic acid ; and when chloroform is ingested by the stomach, A. Zeller has shown that two-thirds of its chlorine appear as chlorides in the urine. The halogens alone, as Binz himself has demonstrated, possess a decided narcotic action. *Ozonised air* is also more or less soporific in its properties ; and *perosmic acid*, which readily parts with its oxygen in an active form to albuminous bodies, has even been successfully employed in obstinate peripheral neuralgia in the form of subcutaneous injections of 4 to 6 drops of a 1 per cent. watery solution. Marsh-gas and other carbohydrates have no narcotic action, but when associated with chlorine they possess this property. So far, then, as the living active protoplasm is concerned, bromine, chlorine, iodine, and ozone appear to diminish its activity.

Atropin paralyses the peripheral nerves ; and this can be well shown experimentally with the vagus, in which, while the trunk of the nerve remains susceptible to stimulation, this is not the case with its cardiac endings. The motorial end-system in the iris is similarly paralysed, and in an atropised eye not only is the power of accommodation temporarily lost, but the intra-ocular pressure is lessened. Its paralysing action on the secretory end-apparatus is also well known, as has been proved in the case of the submaxillary gland.

Habitual and obstinate constipation has often been greatly relieved by atropin in small doses ; so also neuralgia and cramps of different parts of the intestinal tract. Atropin has likewise been found very useful in epilepsy, according to some authorities, potassic bromide alone being superior to it in this respect ; also in poisoning by digitalis, and in cases of fever with failing pulse.

An antagonistic action seems to exist between quinine and atropin, and a similar antagonism is manifested between atropin and *muscarin*. In poisoning by this latter body death is due to direct respiratory and indirect cardiac paralysis, the latter resulting from stimulation of the cardiac inhibitory fibres. In cases of poisoning by fungi, atropin should therefore be given a trial. Further, between atropin and morphin a therapeutic antagonism exists, and for this reason morphia injections have been successfully employed in poisoning by atropin. Chloral has also been used with benefit in similar cases.

Daturin is a mixture of atropin and *hyoscyamin*, while duboisin is only hyoscyamin. This last body is about twice as poisonous as atropin. It has been used advantageously in epilepsy, dysmenorrhœa, mental debility, after excessive motorial stimulation, and in all cases of night-sweats in phthisis where atropin has proved inactive. Arranged in the order of their activity these bodies would stand thus : atropin, daturin, hyoscyamin, and hyoscin (a second isomer of atropin).

T. Cranstoun Charles, M.D.

Article 2484.

A Study of the Bladder during Parturition. By J. Halliday Croom, M.D. Edinburgh : David Douglas. 1884.

Dr. Halliday Croom has for some time past excited the interest and attention of every obstetrician who follows the advance of the scientific workers in his department. The observations upon which Dr. Croom has founded his original and valuable monograph on the various modifications which the bladder undergoes during the parturient process, have been made and recorded in a thoroughly scientific spirit. By aid of the manometer, Dr. Croom has gauged the minimum and maximum pressure upon the bladder during the several stages of labour. His personal observations were made in the Maternity Hospital of Edinburgh, and he has supplemented them by extensive bibliographical research at home and abroad. Dr. Croom first discusses the conditions of the bladder during early pregnancy, and sums as follows : first, that it is a pelvic organ ; second, that it distends transversely ; third, that an antero-posterior distension is limited ; fourth, that its vertical distension is interfered with by the weight of the uterus and the action of its attachments. During pregnancy the bladder, when not overdistended or empty, remains in the pelvis ; at the end of pregnancy the capacity of the bladder is diminished, owing to the low position of the lower uterine segment and fœtal head in primiparæ. In multiparæ the result is similar but less marked, owing to the descent of the uterus. In any case, just before labour the bladder is entirely a pelvic organ. During labour the main point to be observed is the elongation and elevation of the bladder. In one of Braune's sections the flattened empty bladder is seen above the pubes and fœtal head, which has entered the pelvis. In conclusion, the author finds that pressure is brought to bear on the bladder during labour. In normal labour, the maximum pressure is about three pounds on the square inch. This pressure is obtained during the second stage of labour, but it may be equally during the first stage if voluntary effort is added. The minimum pressure in an ordinary labour is one pound on the square inch. The work, which contains in addition an account of the bladder during the early puerperium, is embellished by excellent illustrations and tables showing the various pressures on the bladder during the different stages of labour. It will well repay a careful perusal by all who are interested in a somewhat obscure factor in the mechanism of labour.

Fancourt Barnes, M.D.

NEW INVENTIONS.

Article 2485.

MEDICATED GRAPES.

We have received from Messrs. Benedict & Co., of Liverpool, specimens of their 'Medicated Grapes.' They consist apparently of raisins impregnated with one or more active drugs and covered with sugar. They are attractive in appearance and palatable. In one formula the dose of carbonate of bismuth in each grape is given as a grain ; whilst in another the dose of croton-chloral-hydrate is said to be from

an eighth to half a grain, too minute a dose for ordinary therapeutic purposes. The salts of the alkaloids might be given in this form, but there would be obvious risk in prescribing atropine, digitaline, or hyoscyamine in a sweetmeat.

MISCELLANY.

THE THIRTEENTH CONGRESS of the Association of German Surgeons will be held in Berlin from April 16 to April 19, and the third German Medical Congress will be held in the same city from April 21 to April 24.

DR. GLUCK, senior assistant in Dr. von Bergmann's clinic in Berlin, has been appointed Professor of Surgery in the University of Buda-Pesth.

DEATH UNDER ANÆSTHESIA.—A case of death under anæsthesia in Prague is mentioned in the *Centralbl. für die Gesam. Therapie*, Feb. 1884. The anæsthetic used was supposed to be bichloride of methylene, but chemical analysis after the fatality showed it to be a much cheaper mixture of chloroform and alcohol.

A NEW DISINFECTANT is mentioned in the *Centralbl. für die Gesam. Therapie*, Feb. 1884, under the name of bromum solidificatum (solidified bromine). It consists of 75 per cent. of bromine made up into pastilles of 20 grammes (two-thirds of an ounce each), every such one being sufficient to disinfect an area of 130 cubic feet with its contents. The disinfectant must occupy an elevated position in the room, and should be left there for from four to six hours, after which the windows may be thrown open.

A NEW PROCESS OF MUMMIFICATION.—The method which is described by M. C. Depérais in the *Gaz. Méd. de Paris*, No. 9, 1884, consists in placing the body in a solution of chloride of calcium (47° Beaumé), maintained for some time at a temperature of 106° C. (228°·8 F.). The water of the tissues is gradually replaced by the solution, and the process is accompanied by a distinct shrinking of the corpse, which is then placed in a cold saturated solution of sulphate of soda. Sulphate of lime is formed and remains in the tissues, while the chloride of sodium is dissolved by the water. The body can then be taken out and dried in a stove.

NEW DISCOVERIES, especially in anatomy, are not always novel. The so-called 'supplementary anterior ventricle of the larynx' is said to be simply the *fovea centralis* of Merkel, which is described in our best text-books on diseases of the throat. It is a little foramen at the anterior insertion of the vocal bands, leading into the ventricles upon each side. It exists in a form much more pronounced in some of the lower animals, and in man is merely rudimentary.

THE DOCTOR AND THE DRUGS.—This is how the anecdote is told by the Portuguese gentleman who writes on *English as She is Spoke*:—'A physician eighty years of age had enjoyed of a health unalterable. Theirs friends did him of its compliments every day: Mister Doctor, say they to him, you are an admirable man. What you make then for you to bear you as well? I shall tell you it, gentlemen, he was answered them, and I exhort you in same time at to follow my example. I live of the product of my ordering without take any remedy who I command to my sicks.'

CRANIAL INJURIES AND MADNESS.—Some interesting observations on the connection between insanity and crime are to be found in extracts from the report of the medical officer of the Woking Prison for Females for the past year recently issued. After instancing the case of a woman, who was over and over again convicted and sent to prison, whose passion for destroying prison furniture and her own clothing never ceased, and who died at fifty years of age, whispering a regret that her strength would not permit her to indulge as formerly in acts of violence, the medical officer goes on to say in connection with this subject of wrong-doing and the condition of the brain, that he was led during a series of examinations to the discovery that a very notable number of convict women have had their skulls fractured. It is not uncommon to hear a woman say, 'I knew I was in a temper, but I could not help it; I was mad.' This irascibility and loss of self-control are, he adds, not unfrequently associated with a damaged skull and presumably an injured brain. So seriously are the functions of the brain disturbed after external injuries, often of a slight degree, that a very small quantity of alcoholic liquor is sufficient to produce a maddening effect on the subject of such an injury,

AN AMERICAN RHINOLOGICAL ASSOCIATION for the discussion of Diseases of the Nasal Passages and such other diseases as are sequence of them, has been formed.

A NEW FORM OF ASPIRATOR.—An aspirator has recently been devised by M. Creuzan, of Bordeaux, which is worked without piston or stop-cocks. It consists essentially of a large caoutchouc bulb, which, by means of a special arrangement of valves, may serve as an aspirator or an injector. A glass cylinder is attached to the bulb, so that the nature of the fluid may be readily determined. There is no possibility of air entering the cavity from which the fluid is to be removed, and the instrument possesses the further advantage that the operator requires no assistant, but can readily hold the trocar in position with one hand and the aspirator with the other. Any quantity of fluid may be removed by simply compressing the bulb without detaching the instrument from the needle.

TRICHINA IN GERMANY.—An article in the *Archives Veter.* on this subject shows the frequency of the prevalence of trichina in the north of Germany, and it questions the right of Germany to accuse America of furnishing so much trichinised pork, as the trichinised pork of America has at least one advantage, that of rarely communicating the parasitic infection, as, by the process followed in preparing the pork in Chicago and Circinnati, the trichinæ are killed, which is not the case in the pork considered eatable in the north of Germany, where, according to the custom of the country, it is but imperfectly cooked. It would seem, from the recent discussions at the German Bundersrath, that the commissary of the Imperial Government could cite but three cases of trichinous infection resulting in Germany from the consumption of American pork; that of Rostock, 1871; Bremen, 1872; and that of Dusseldorf, 1881; while he could cite by thousands the cases of infection caused during that period by indigenous trichinous pork, and nearly by hundreds the cases of death which that infection had caused. The following from the official reports published by Dr. Eulenberg gives the number of cases of trichinosis observed during six years in Prussia.

Year.	Carcasses Examined.	Cases of Trichina.
1876	1,728,505	800
1877	2,857,272	701
1878	2,524,105	1,222
1879	3,213,155	1,975
1880	3,342,303	2,284
1881	3,118,780	1,695

Making 8,677 cases of trichina out of a total of 16,782,210, or one case in 1,934. To recognise these cases of trichina it required an army of inspectors with the microscope, which, numbering 12,000 in 1876, increased to 18,581 in 1881. In spite of these precautions the number of published cases of trichinosis in the human subject has been quite considerable. There were in 1876 358 cases; 1877, 356; 1878, 488; 1879, 400 and over; 1880, 200; 1881, 238. That is to say 2,040 in six years, being 340 a year, out of which there were 84 cases of death, or 14 a year.

The London Medical Record.

Article 2486.

LEHMANN ON THE INFLUENCE OF COMPRESSED OXYGEN ON VITAL PROCESSES.

In experiments on the influence of compressed oxygen on the vital processes of cold-blooded animals and some occurrences connected with oxidation, Dr. Karl B. Lehmann has obtained the following results.

1. While a frog's heart shows pulsations for at least 24, at most 48 to 56, hours after removal from the body (independently of its being cooled or not), in compressed oxygen (10 to 13 atmospheres) it comes to a stop after 8 to 9 hours, at the temperature of the room. Cooling it as much as possible (2° to 3° C.) lengthens its life only slightly, *i.e.* to about 12 hours. Should the heart be removed from the apparatus after twenty-four hours, it regains its excitability after a few minutes. Compressed oxygen thus makes the heart's vitality latent.

2. The behaviour of entire uninjured frogs in compressed oxygen (10 to 14 atmospheres) accords in detail with those which Aubert has described with regard to frogs in pure nitrogen and in highly rarefied air. After a period of normal behaviour, paralysis ensues without preceding symptoms. The transition into the conditions of loss of reflex will sometimes, but rarely, be signalised by clonic spasm. M. Bert's assertion that an increased excitability of the spinal cord and constant spasm precede the paralysis is disputed, in so far as it relates to cold-blooded animals; neither do they occur in mice. The cramps specially noted in birds by M. Bert are recognised as modified suffocation spasms, and the idea of a poisonous action asserted by M. Bert is disputed.

3. The lymph-hearts persist long after complete spinal paralysis; they can also be removed from the cord without disturbance of their pulsations, which shows them to be automatic.

4. Rapid decompression after long compression with oxygen (8 to 12 atmospheres) leads to copious disengagement of gas in the blood and tissues of cold-blooded animals; the mechanical irritation of the spinal cord, owing to the evolvement of gases, gives rise to spasm, and some hæmorrhages in muscles ensue.

5. Oxygen does not act as a poison. Animals die in compressed oxygen from lessened tissue-change, with more or less modified symptoms of suffocation.

6. Phosphorus, placed in oxygen compressed to 14 atmospheres, shows no trace of light, formation of acid, or ozone. A substance is formed which blackens silver nitrate paper (Phosphordampf).

7. Phosphorus can freely burn when kindled in 10 atmospheres of oxygen.

8. The theory of Thénard and Meissner, that phosphorus becomes covered with a layer of oxide which prevents further oxidation, must be given up. When brought into the air, the phosphorus shines immediately.

9. The acceptance of the notion of a shell of condensed oxygen around the phosphorus will explain the appearance of light after decompression.

10. Compressed oxygen is not in itself a good oxidative medium. For oxidation goes on as quickly, or more quickly, in air, with reduced indigo, sulphate of iron, alkaline pyrogallic solution, and cyanin. On the other hand, oil of turpentine warmed with caustic potash, or cod-liver oil treated in like manner, shines more in compressed oxygen, while light-bearing organisms shine for hours unchanged.

These new results make a series of older theories appear untenable, though the study of the behaviour of phosphorus in compressed oxygen throws no light on the cause of deaths of animal cells in the same medium. Paul M. Chapman, M.D.

Article 2487.

BRICON ON ACTINOMYCOSIS.

The following is an abstract of a leading article by M. P. Bricon in *Le Progrès Méd.*, 1884, No. 7. The discovery of the parasite was made by veterinary surgeons. It was first described by Rivolta in Italy in 1868, and afterwards by Perroncito. Bollinger re-discovered it in Germany in 1875, and gave it its present name. Israel described the first case in a man, and was followed by Ponfick, Rosenbach, Partsch, and others.

Actinomycosis in cattle appears in the shape of tumours situated in the jaws, generally the lower jaw, or of isolated nodules or tubercles, with ulcerated surfaces, on the inside of the mouth, nose, or on the tongue, which have been regarded as sarcomatous, tubercular, scrofulous, &c.

In man, in the place of tumours, there are foci of suppuration in various regions, such as dental abscesses, abscesses in the iliac fossæ, purulent pleurisies, &c. In all cases the lesions, whatever these may be, are incontestibly due to the parasite. It has been detected by Johne, apart from any lesion, in the tonsils of man and pigs, so that its development appears to be dependent upon its finding a soil favourable to it. Wounds especially afford a favourable entrance to the contagion.

Its botanical classification has given rise to some dispute. Israel inclined to regard it as streptothrix Forsterii, a fungus which was discovered by Graefe in 1855, in the lachrymal canals. At the present time disagreement still exists; some, like Ponfick, see in it a developmental stage of a higher kind of fungus; others regard it as fully developed.

Johne has ventured to doubt the absolute identity of the disease in men and oxen, on the ground of the negative results obtained by inoculating a calf and two pigs with actinomyces taken from a human subject during life and inoculated at once.

A case of Birch-Hirschfeld's has some analogies to actinomycosis. A child fell ill with violent fever, which disappeared after the removal of a slightly adherent whitish mass from one tonsil. The mass recurred twice, the fever reappearing. On examining the mass it was found to consist of radiating filaments arranged like a brush, but without enlargements at their ends. A fourth recurrence having supervened, the tonsil was bathed daily with a sponge and powdered with sublimed sulphur. This effected a cure. The name leptothrix fasciculatus was proposed for the parasite.

Rivolta has proposed the names discomyces and sarcomyces bovis; while for a similar parasite found in scrotal tumours of the horse he suggests the name sarcomyces equi.

Canali found in a case of pulmonary actino-

mycosis a number of corpuscles of variable shape, provided with a double-walled envelope, and often united in twos or forming chains.

Israel has finally succeeded in cultivating the parasite in coagulated ox serum after Koch's method. The parasite develops by spores from the tenth to the fourteenth day, and in eight weeks only grows half a centimètre from the centre of cultivation.

Johne succeeded in inoculating the disease in calves by introducing the fungus under the skin and into the peritoneal cavity. One or two months later, they presented characteristic tumours. Ponfick failed to inoculate rabbits and dogs, but Israel has succeeded in inoculating a rabbit from a man, and Vachetta has seen a case of actinomycosis in a dog.

The actinomycetic tumours are generally sarcomatous in appearance. On section they have a lardaceous, transparent, greyish-yellow aspect, with small or large cavities filled with pus. Pflug has found in the cow little nodules scattered over the lung, resembling miliary tubercle. The fistulous tracks are pale, fungating, covered with yellow corpuscles, and very similar to scrofulous sinuses. The lungs are attacked in preference to all other organs.

Friedländer says the fungus may be seen in the pus in the form of gelatinous granules, of the size of a millet-seed. On squeezing these bodies their structure is quite visible; staining is useless.

Bizzozero says the fungus may be easily seen on teasing one of the giant-celled tumours frequent in the jaw of the ox. The parasite is in the form of little granules of the size of a pin's head, which are made up of numerous masses of actinomyces, each not larger than one-tenth of a millimètre in diameter. Each ball is shaped like a mulberry; they are often calcified, in which case the salts must be dissolved out by acid previously to studying them. The central part is made of interlacing filaments, which radiate to the periphery of the mass, where they terminate in pear-shaped gonidia, which are yellowish and refract light strongly.

Baum and König had noticed what they supposed to be crystals in certain abscesses, which may have been calcified masses of actinomyces.

This disease in the human subject may be benign or malignant. In the former the symptoms are purely local; there is no fever, and there are no secondary deposits. A swelling appears usually at the angle of the lower jaw, which may extend so as to invade all the cervical regions and even the supra- and infra-clavicular fossæ; finally, the skin ulcerates, and permits the escape of a turbid fluid containing pus, blood, and grains of actinomyces; fistulous tracks result. The abscess evolves slowly, with little pain, accompanied by inflammatory thickness of the subcutaneous tissue and moderate redness without œdema. In the malignant type, the beginning may be the same as in the preceding, but symptoms are added of pulmonary or pleural inflammation, followed by abscesses which open externally by fistulous tracks; there are often caries of the ribs or vertebræ, abscess of the psoas, &c. More frequently the affection commences by attacking the lungs or pleura. The course is slow. The fever often is hectic in type. The pus on opening the abscesses is scanty and sero-purulent, rarely purulent.

Of the twenty-eight cases published, about half have proved fatal, but it is probable that many mild cases have passed unrecognised. The diagnosis can only be made by the microscope, when attention has been drawn to this disorder. The prognosis is bad, if the internal organs be affected, or if there be metastases. In all cases, reserve is needed. Treatment consists in opening and draining the abscesses, removing the fungus with the curette, and cauterisation. Little is known as to prophylaxis, but it is possible that the fungus obtains entrance by means of carious teeth or inflamed tonsils. So far, no facts have been recorded to support the view that any occupation is specially liable to this disease.

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Article 2488.

POLLITZER ON THE VALUE OF CERTAIN SINGLE SYMPTOMS IN THE DIAGNOSIS OF DISEASES OF CHILDREN.

In this paper, Emeritus Professor Pollitzer contributes (*Jahrbuch für Kinderheilkunde*, Band xxi., Heft 1) from his ripe experience some very valuable hints for the guidance of the less initiated. The 'single symptoms' which he enumerates are in some cases pathognomonic, and in others are of great importance for differential diagnosis. The first symptom is a *strongly marked nasal or palatal cry*. This is present in, amongst other complaints, syphilitic ozæna, hypertrophied tonsils, and paralysis of the soft palate; but, where these can be excluded, it affords very strong presumption of retropharyngeal abscess. Dr. Pollitzer relates that on one occasion he was examining a child when the nurse passed through the room, bearing another, four months old, in her arms. On hearing it give this nasal cry he stopped the nurse, but the mother affirmed that the baby was quite well. However, Pollitzer introduced his fingers and felt the expected swelling. This was incised, and a large quantity of pus evacuated.

The second symptom is *an excessively prolonged loud-toned expiration, with normal inspiration and without dyspnœa*. This is an early symptom of chorea major, and may precede all other manifestations of the complaint. In illustration of this, the author mentions that he was once called to see a case of supposed croup, but, on observing this peculiar breathing, he felt no hesitation in diagnosing chorea. The mother had observed this symptom about two hours, and stated that it appeared suddenly, when the child was apparently quite well and asleep. The next day he was informed that this breathing continued for another hour, and then gave place to a singing semi-delirium. Later, the ordinary symptoms of chorea developed themselves.

The third single symptom is that of a *high-thoracic, continued sighing inspiration*. The author regards this as almost pathognomonic of weak heart, and of certain cases of acute fatty heart. The breathing differs from that of croup and other stenoses, in that, while the diaphragm is almost passive, the accessory muscles of inspiration are in vigorous action. The symptom is of especial value because it is early, and furnishes an indication for treatment long before the other signs—such as cyanosis or pallor of the face, thready pulse, cold extremities, &c.—show themselves.

Another 'single symptom' of importance is *the presence of a pause at the end of expiration*. This serves to distinguish between laryngeal catarrh and croup, and, when well marked, absolutely excludes the latter. In examining for it, however, the room should be perfectly still, and the ear should be placed close to the patient's mouth. The author relates how he succeeded in diagnosing laryngeal catarrh from the mere presence of these pauses, in a child who had been ill three days with stenotic breathing, hoarseness, and great somnolence. The laryngoscopist who was called in confidently expected to find well-marked false membranes; but no such were visible, and the child was well in a few days. Another symptom, of which it is important to understand the significance, is the so-called *respiratio stridula*. It consists of slightly noisy but otherwise normal inspiration and a loud bleating, interrupted (staccato) expiration; it continues day and night, sleeping and waking, with very rare free intervals of ten minutes or a quarter of an hour. It begins soon after birth, and lasts for from eight to twelve months. To the physician unfamiliar with the condition, it appears to be a serious affair and to demand active measures; but, as a matter of fact, it involves no dyspnœa, and does not affect the nutrition or development of the child; moreover, it is very obstinate to treatment, and ultimately ceases of its own accord. The author regards it, therefore, as being within physiological limits, and recommends no treatment.

The next series of symptoms relates to the brain; and the first is *a remarkable drowsiness which makes its appearance without fever or other disturbance, and persists for some time*. Pyrexia from any cause is enough to produce drowsiness in a child; but when the latter coincides with a normal temperature, and continues so for twenty-four to thirty-six hours, it becomes a most valuable symptom of commencing brain-disease; and the same holds good when the drowsiness sets in upon convalescence from fevers when the pyrexial stages are passed. The only other conditions that can produce this apyrexial drowsiness are narcotic poisons and uræmia, but these are easy to differentiate. Another single symptom of great value in the early diagnosis of brain-disease is *a very elevated incompressible anterior fontanelle*. This indicates not only increase of the contents of the skull, but also that that increase is due to something more dangerous than simple hyperæmia. It is all the more valuable when the child is wasted from any cause. When the swelling is so great as to resemble a wedge, and no trace of pulsation is present, the disease is probably either intermeningeal hæmorrhage or purulent meningitis of the convexity. The next series of single symptoms relates to the *character of the child's cry*. 1. A violent shrill cry, lasting two or three minutes, marked by anxious expression, and occurring about an hour after the child has fallen asleep, and repeated night after night, is probably due to the action of dreams on an irritable nervous system. It can be cured by the administration of a full dose of quinine an hour before bedtime. 2. A cry, lasting frequently five to ten minutes, and recurring periodically several times in the twenty-four hours, indicates, more especially if dysuria have been observed, spasm of the bladder, and can be cured with a dose of belladonna at bedtime. 3. The cry accompanying defæcation indicates, as is well known, fissure of the anus. The author says nothing of operation for this, and recommends aperients and an ointment of zinc and belladonna. 4. 'A violent, almost continual cry, the hands grasping the head, which is rolled round and round, and buried in the pillow,' in little children, indicates otalgia. 5. A cry, lasting days or weeks, increased on movement, and associated with profuse sweating and fever, is rare, but may indicate acute general rickets. 6. The cry associated with chronic sleeplessness is difficult to relieve, though it frequently appears to have no ill effect upon the child's nutrition. In some cases it appears to be inherited, as one of the parents has occasionally been observed to be the subject of insomnia or hemicrania.

The next series of single symptoms have no particular interdependence. Amongst these are the following. 1. A striking collapse and immobility of the nostrils almost always indicates hypertrophied tonsils. 2. A weakness and immobility following a short illness, and out of all proportion to such a

slight cause, is very frequently the first symptom of infantile paralysis. 3. A single symptom of importance, in a condition which is sometimes void of symptoms (congenital idiocy), is the habit the infant has of perpetually and automatically placing the hands in front of the face. 4. A stiffness of posture and gait, with a pained expression on changing position, is an early symptom of spondylitis. 4. Obstinate vomiting after every kind of food, and lasting for weeks, indicates, in a child whose fontanelles are closed and whose cranial circumference is large, the supervention of acute upon chronic hydrocephalus. The author, in conclusion, is careful to give the oft-repeated warning against diagnosing a disease from a single symptom—a real pathognomonic symptom being rare. He claims for his observations, where these are original, the merit of facilitating diagnosis at a stage when treatment is likely to be followed by rapid benefit.

RALPH W. LEFTWICH, M.D.

ARTICLE 2489.

MOXON ON THE DIFFERENCE BETWEEN EFFUSION IN THE RIGHT AND THE LEFT SIDES OF THE CHEST.

DR. MOXON, in the *Lancet*, Jan. 1884, p. 53, contributes a lecture on 'Effusion of Liquid into the Chest.' Referring to a note in Dr. Frederick Roberts's *Practice of Medicine*, that 'friction-sound may or may not be heard at the margin of the dulness,' the author concludes that no one would anticipate finding friction only over the dull area where fluid was present. Yet this is often the case according to his experience; and he raises the question, whether the so-called pleuritic rub is really at all due to rubbing—whether, in fact, it is not a creaking of the lymph on the pleura when it is stretched by the lung in inspiration.

The author remarks that, when liquid is poured into the left chest, and the heart's beat is transferred towards the right side, this apparent displacement is not altogether due to the movement of the heart towards the right side; and conversely, when liquid in the right chest fails to move the beat of the heart towards the left side, this failure is not simply due to any inability of the heart to move to the left. An obstacle to the entry of blood into the right heart would tend to reduce the size of the whole heart; but an obstacle to the entry of blood into the left heart would tend to retain blood in, and so to overfill and enlarge, the right heart. Then again, owing to the anatomical position of the left auricle, pressure from the left will be very effectual upon the left auricle, whilst pressure from the right side of the mediastinum will tell upon the right auricle, but in a less degree, owing to its attachments being more yielding. The course also of the pulmonary artery to the left exposes its trunk to pressure from the left side of the mediastinum, and will tend to retain blood in, and so enlarge the cavities of, the right heart. When the left chest is filled with fluid the heart is displaced over to the right, and a large part at least of this change is due to the right cavities of the heart being distended, from pressure of the fluid on the left auricle impeding the entry of blood into the left cavities, and the real displacement of the apex is not so much as it appears to be at first sight. When fluid fills the right chest, the heart is displaced somewhat to the left; but, owing to the impediment to the entry of blood into the heart, this structure is diminished in size, so that a good deal of the movement to the left, caused by the effusion, is neutralised by the diminution of the contents of the heart.

RICHARD NEALE, M.D.

ARTICLE 2490.

TRAUBENBERG ON THE ACTION OF AIR-BATHS ON THE TEMPERATURE, &c., OF FEBRILE PATIENTS.

IN the *Vratch*, 1883, Nos. 3 and 4, Dr. L. R. Traubenberg contributes an able article embodying the results of his observations on the action of cold air-baths, which were carried out on nine patients (six with enteric fever, two with pulmonary phthisis, and one with relapsing fever) at Professor V. A. Manassëin's clinic, in St. Petersburg. Each time the patient was put in the bed, stripped to the skin, and shampooed with a woollen glove, or simply by the hand. The shampooing was repeated as often as the signs of cutaneous hyperæmia disappeared. The temperature of the bath (that is, of the ward) varied from 10° to 18° R. (from 56°·5 to 72°·5); the duration, from twenty to seventy-five minutes. Eighty-five baths were administered to nine patients. The average figures show the following effects of the air-bath. 1. The axillary temperature falls 0°·74 C. 2. The rectal temperature falls 0°·70 C. 3. Breathing becomes deeper, and is reduced 6·4 respirations per minute. 4. The pulse becomes fuller and is reduced 13 beats per minute. On more closely scrutinising his tables, the author comes to the conclusion that the effects of the air-bath are dependent upon certain conditions.

1. *The time of the day* at which the bath is taken. The strongest action is observed when the bath is taken in the period between 3 and 9 o'clock A.M.; the last between 3 and 9 P.M. In other words, the bath displays the greatest effects during the period of the natural decline of febrile temperature; and the least, during the natural rise of the latter.

2. *The temperature of the room.* The greatest effects are obtained from the bath at 13° or 14° R. (61°·2 or 63°·5 Fahr.); the least, at 10° or 11° R. (54°·5 or 56°·7); the bath at from 16° to 18° R. (68° to 72°·5) occupies a middle place between the former.

3. *The duration of the bath.* The amount of the useful action of the air-bath is, on the whole, increased with its duration; however, it is increased not proportionately to the latter, but considerably less. That is, the law established by Liebermeister in regard to water-baths is equally true in application to air-baths, and forces on us the same practical corollary, that it is more rational to more often administer baths of a shorter duration, than to order prolonged baths in prolonged intervals.

4. *The stage of the febrile disease.* The resistance of the febrile system to the antipyretic action of air-baths is different in different stages of the disease (typhoid fever). This resistance falls (and the antipyretic effect of the air-bath becomes correspondingly stronger) with the disease running to its termination.

5. *The individual peculiarities of the patient.* The greatest antipyretic effects are observed in the patients who present the greatest surface of body

without possessing strongly developed muscular system and fatty layers. That is, the air-bath produces the strongest antifebrile action in tall and broad and badly nourished young persons.

Passing to some comparative observations, the author states that the antipyretic action of the cold water-bath is much stronger, and lasts considerably longer, than that of the air-bath. Hence the first and chief indication for the use of cold air-baths is an impossibility of the administration of water-baths, as is only too often met in country and poor practice. The other indications, as given by Dr. Traubenberg, are these: an excessive sensibility of the patient to cold water; considerable weakness of the heart; considerable congestion of the internal organs; and finally, in children's cases. Of course, as a supplementary means, the air-bath may be more or less advantageously employed in all forms of the antipyretic treatment. [An article on the same subject, by Professor Kaczorowski, may be found in the London Medical Record, May 1879, p. 187.]

V. Idelson, M.D.

Article 2491.

ALLBUTT ON NEUROSES OF THE VISCERA.

Dr. Clifford Allbutt, in the Gulstonian Lectures for 1884 (*Brit. Med. Jour.*, March 1884, p. 495, 543, and 594), chose for his subject those painful disorders which have their seat in the nerves of the viscera, but spoke occasionally of some perturbations of those nerves which are not attended with pain, strictly so-called. Neuroses above the belt are more clearly understood than those below; and the lecturer confined himself almost entirely to gastralgia, nephralgia, hepatalgia, and their allies. In looking through the index of his case-book, Dr. Allbutt was struck with the few cases entered as 'dyspepsia,' for, strictly speaking, there is no such disease; dyspepsia is only a symptom. Sifting the heap of affections attended with dyspepsia, the author proposes four chief groups of stomach-disorders; first, those which are due to grave disease of the stomach itself, such as cancer, ulceration, &c.; secondly, less grave but still local diseases, such as simple catarrh, acute and chronic gastritis; thirdly, disorders which depend upon no visible changes in the structure of the organ, but consist in some disorder of its work or secretions, and are termed functional; fourthly, disorders which depend upon some influence coming from blood or nerve, from which visible local changes may or may not ensue. The first and second classes can be put aside, but it is not easy to classify the remainder of cases met with. Pure neuralgia of the stomach may be mingled with neuralgia awakened by local irritation within the viscus, with disordered secretions or metabolisms within it, due to perturbed innervation, or with forms of primary dyspepsia of local origin which concern the nervous system little or not at all; it is essential to root out all these causes. In persons overworked, two kinds of dyspepsia are met with. In the first, there is simply a feeble stomach; the tongue is clean and pallid, its surface œdematous, and its edges indented. Such a person has no appetite, and the little he eats causes a weary sense of repletion until the ingesta slowly pass off. In the second class, the tongue is bulky and also indented, and is protruded slowly, spreading forth as it issues. It is thickly coated, especially towards the back. The complexion is muddy, and the countenance bears the mark of mental depression. The urine deposits lithates, and the stomach and liver act feebly. In one, nervous exhaustion produces only a simple atony of the stomach; in the other, an aberrancy. The latter patient has most likely some echo of gout in him, and is well treated with strong tonics, such as quinine and iron, but best of all by rest and upland air, which will clean the tongue in a fortnight.

The other viscera, like the stomach, may be affected in different ways; for instance, jaundice may be set up simply and directly by causes acting upon the nervous system, or it may be due to local causes only; or it may owe its origin to some admixture of the two sets of causes. Constipation or diarrhœa may also be due to nervous or local causes.

Dr. Allbutt then goes on to affections of the uterus and its appendages, and condemns the practice of putting down every ill that arises in the female pelvis, to the uterus. 'It is time,' says Dr. Allbutt, 'that we complete our reaction from this gynæcological tyranny, and that we, of this College, no longer permit ourselves to be snubbed by these brethren of ours, who calmly tell us, with their superior airs, that our use of such expressions as uterine neuralgia, irritable uterus, ovarian neuralgia, neurasthenia, and the like, comes of a shallow socialism, and is grounded upon the emptiness of our knowledge of uterine diagnosis.' 'The spirit of meekness alone restrains me from throwing the same stone again, and accusing our gynæcological friends of ignorance of neuropathics, and of the neurotic diathesis.' On the other hand, it is stated that the physician is much to blame, in that he has thrown aside many cases of genuine uterine malady, and of genuine suffering, as hysteria. A person of feeble purpose, of limited reason, of foolish impulses, of wanton humours, of irregular or deprave appetites, of indefinite and inconsistent complaints seeing things as they are not, often fat and lazy, always selfish, may be put down as hysterical; or to take a case, not so marked, the patient may be capricious, listless, wistful, attractive perhaps, yet having always the chief notes of hysteria—selfishness and feebleness of purpose; complaining of globus, of palpitation, which is never perceived by the stethoscope; of sleeplessness, which the nurse never notices; of dyspepsia, which does not lessen the labours of the cook; of pains, which never flush the cheek. These are some of the symptoms known as hysterical; but, nevertheless, one has to cure the patient both in mind and in body. The worst thing for patients of this stamp is to fall into the hands of gynæcologists, who persuade them that all their troubles are due to the uterus and ovaries, and proceed to the introduction of pessaries, applications to the vagina, &c. Dr. Allbutt insists that it is necessary to obtain the confidence of patients, to show them that by the use of proper means of keeping the bowels regular, with the help of tonics, and a regular mode of life, they may be restored to health and strength, instead of dragging on for years as confirmed invalids.

In the second lecture, the author points out that gastralgia is common enough among men, and, though the chief of the neuroses of the stomach, it is in close association with flatulence, vomiting,

hyperæsthesia, and such miseries as distension, sinking, craving, or loathing of food. In going over his case-book for the last ten years, Dr. Allbutt has extracted 139 cases of gastric and abdominal neuralgia. Gastralgia is most common in men from the ages of 20 to 45. In women, the average age is about ten years younger. Like migraine, it tends to die out in middle life, and, like it again, it is attended with less and less vomiting as age increases. Several of the cases are alluded to, and the question of diagnosis between gastralgia and gastric ulcer is discussed at some length. Then allusion is made to some cases of anorexia nervosa, lately published by Lasègue and Sir William Gull. It occurs in young women, and nearly always in those who inherit a decided neurotic taint. Five objective symptoms are always present; namely, amenorrhœa, constipation, subnormal temperature, slow pulse, and cold extremities; to these may be added a degree of emaciation proportionate to that of the malady, and a tendency to loss of hair from the scalp. One case was restored to health by a combination of morphia with arsenic and quinine, administered with food. Flatulence is a symptom very characteristic of gastralgia, and it is to be noted that in all these cases the wind is quite inoffensive, and is certainly produced in some way by the agency of the nervous system. Borborygmi are also common, and are generally greatly benefited by tonic measures, with gentle dumb-bell exercise.

In his third lecture the author speaks of the agonies of enteralgia, referring to a description of it in Reynolds' *System of Medicine*, by Dr. Wardell. Dr. Allbutt offers a correction in stating that in his opinion females are not more prone to the disease than males, whereas gastralgia is commoner in women by two to one. The greater relative frequency of enteralgia in men than of gastralgia, may be explained in part by its being more directly allied to gout than is gastralgia. Enteralgia, like sciatica, may be a 'pure neurosis,' but is, like it, not rarely of gouty nature. Enteralgia is aroused rather by the strife of public life, than by the teasing of homely worries. A few cases are then cited; and it is remarked that in many cases diarrhœa has been associated with gastralgia, but only in a few with enteralgia.

Turning to consider the neuralgiæ of other viscera, an insurmountable difficulty is met with, that of proving definitely in what nerves the pain may lie. Hepatalgia is regarded as a pain aroused by the coincidence of an impressionable or neurotic habit with the presence of gall-stones at rest in the gall-bladder. Nephralgia, too, may be due partly to the neurotic condition, partly to some extra work being thrown on the kidney, when the patient is below par. In cases of chronic renal disease, especially in granular kidney, gastralgia may appear; and likewise the concurrence of gastralgia with aortic regurgitation is noticed, with a short account of a case furnished by Dr. Ralfe and the late Dr. Murchison, in which peculiar forms of neurosal attacks were present, designated as 'renal storms.'

Neuroses of the vagus nerve are frequently associated with certain kinds of eczema, lichen, and psoriasis. In 18 per cent. of cases a history of skin-affections was noted. A distinction is partly to be seen in the histories of patients and of their relations, and partly, though not invariably, in the characters of the eruptions themselves. In the dartrous these eruptions tend rather to be more acute, and more symmetrical: to moisten, to spread, and to itch greatly; while in the gouty, they tend rather to limitation, to dryness, to lack of symmetry, and to a less active tint of hyperæmia. Another diathesis also often recorded is the rheumatic—of the kind that culminates in rheumatic fever. The author, however, does not think that any direct tie can be proved to exist between the rheumatico-gouty diathesis, and the eczematous and the visceral neuroses. Turning aside from the consideration of these affinities, it is stated that perhaps the disease most largely found in neurotic families, beyond their neuroses, is phthisis; and this applies not only to the gastro-abdominal neuroses, but to all of them. A pure neurosis goes hand-in-hand with phthisis and acute rheumatism; but pains like migraine, enteralgia, sciatica, and so forth, may be of the purest type, or may be caused by the poison of gout, and may thus be classed with the eczema and psoriasis of gout.

In speaking of treatment, the author says the first thing must be to convince the patient of the true nature of his malady. Once convince the patient that all his pains are due to neuralgia of his stomach, and that pain caused by food is as accidental as is the increase of pain in tic-douloureux during the act of mastication; once persuade him to throw all alteratives, pepsines, &c., to the dogs, and the battle is half won. A gastralgic can no more eat a good dinner than he can walk a league; but by careful advances, and the repetition of small light, highly nutritious, and social meals, he will eat his way upwards. In severe cases the warmth of bed, for two or three weeks, is of great value; thus securing economy of work and economy of heat. Many a case of neuralgia which has resisted all medicines has been cured by a course of bed alone. Gastralgics as a rule do better inland than at the seaside, but high mountains are not favourable to neurotics. The only things necessarily to be forbidden are tea, coffee, tobacco, and the stronger meats, such as beef. Alcohol is not to be encouraged in neurotics; it draws upon the reserve fund, which it is most important to protect; morphia, too, must be used with caution, but there are cases in which it is highly necessary. In order to keep the patient ignorant of the agent employed, the author generally gives it in the form of Dover's powder in pills. Of other drugs, arsenic in gastralgia takes by far the chief place. A repetition of small blisters to the epigastrium is of service in many cases; quinine boldly pushed with belladonna forms a valuable combination; and so again do quinine and bromide of ammonium, dissolved in hydrobromic acid. The silver salts are of undoubted use. Iron is good in cases where there is marked anæmia; but anæmia is not a common feature in cases of gastralgia. As the stomach gains vigour, cod-liver oil should be added to the dietary; it will help on nutrition and forward recovery. One of the concluding remarks of the author is: 'In a word, arsenic and quinine are the only specifics; and the rest of the treatment may be summed up in rest, sedation, nutrition, and tonics. In enteralgia, arsenic may have some value, but far less than in gastralgia; in enteralgia, quinine and belladonna seem best to forward restoration, though arsenic is not to be despised. A drug recommended in these cases is the walnut-spirit, sold by Messrs. Corbyn & Co., especially in cases of neurotic vomiting.'

Richard Neale, M.D.

Article 2492.

HOFFMANN AND ULRICH ON IMPAIRMENT OF VISION FOLLOWING LOSS OF BLOOD.*

The case described by Hoffman is that of a strong middle-aged man, who had three severe attacks of hæmatemesis within a few days. Two days after the occurrence of the last bleeding, blindness came on quite suddenly in both eyes. A week or two later, a gradual slight improvement began. He first came under observation about three months after the commencement of the blindness. Ophthalmoscopic examination showed emmetropia and clear media. The *left* papilla was markedly white, so that none of the finer vessels were visible in the erect image. The larger vessels were of normal size, the arteries perhaps somewhat narrowed. The fundus, otherwise, was normal. The *right* papilla was paler than normal, but the pallor was limited to the upper half. The vessels were normal. In the right eye vision was $\frac{6}{18}$ barely. The field was entirely limited to the upper half; and even here the peripheral part was wanting. Colour-vision was correspondingly good. In the left eye there was hand-reflex at a short distance from the eye. The field could not be ascertained. Colour-vision was limited to that of large red objects. He rapidly improved under treatment, which consisted of rest in a dark room, nourishing diet, and subcutaneous injection of strychnine. On the fourth day after admission the right eye had vision = $\frac{6}{6}$, and could see Jaeger, 2; the field had increased in the upper peripheral part. The left eye then counted fingers at three mètres with eccentric fixation, the field being small, and situated down and in from the centre. Continued treatment produced very slight further improvement in either eye, and the visual field even in the right remained greatly impaired. Hoffmann believes that the cause of the affection is not any cerebral lesion, but that the entire series of symptoms corresponds almost certainly with an affection only of the peripheral part of the optic nerve, traceable to a retrobulbar inflammation in its trunk.

Cases of impaired vision following loss of blood are divisible into two main groups. 1. The first consists of those occurring during, or a very short time after, the hæmorrhage. Here the loss of vision is explained by an acute anæmia of the brain with the general weak condition due to this. Disturbances of nutrition are caused in the centre as well as in the terminal apparatus by deficient blood-supply, and the consequent contraction of the finer vessels and capillaries. But these disturbances are merely temporary, and the prognosis in such cases is good, and relatively best if the case is due to a single great loss of blood. 2. The second group consists of cases occurring days or weeks after the hæmorrhage. The interval has been found to vary between one and fourteen days. These cases have been theoretically explained by the occurrence of hæmorrhages or of inflammation, in the course of the optic nerve. Only a single necropsy of such a case is on record, where Hirschberg found no hæmorrhage, but distinct traces of a past neuritis. Such an explanation (retrobulbar neuritis) is also supported by the ophthalmoscopic appearances found, and by the fact that the visual field in nearly all the cases observed has suffered a considerable permanent loss, showing that the process has been a destructive one, resulting in the loss of some of the conducting fibres.

The *cause* of such an inflammation is more difficult to discover. It has been sought in the anæmic state itself. But simple anæmia never originates an inflammation; and further, in the cases under consideration, the beginning of the affection corresponds with commencing recovery. The assumption of an inflammation from changes in the vascular walls is negatived by the fact that post-hæmorrhagic anæmia, with continuance of life, is never so severe that the optic nerve-vessels become quite bloodless. Samelsohn thinks that the inflammation arises in consequence of a bloodlessness of the brain (due to the acute anæmia) having been compensated for by an increase of the cerebro-spinal fluid; that, along with the restitution of the normal quantity of blood, there is a serous infiltration of the optic nerve-trunk, due to deficient flow through the lymphatics, whilst the superfluous lymph is forced into the subarachnoid cavity and into the optic nerve, where it excites inflammation. If this theory were correct, we would expect that severe permanent disturbances must ensue after even a single large loss of blood, which is not the case. Hoffmann seeks the cause of the inflammation in the *recurrence* of the hæmorrhage, as we know that the worst cases of visual failure occur in cases where the hæmorrhage has been repeated. Cohnheim's investigations showed that repeated hæmorrhages, following one another quickly, produce an hydræmia of the blood; and that blood which has undergone this change excites inflammation in the vascular walls. The vessels of the optic nerve are especially prone to these changes, possibly from a feeble power of resistance. Indeed, we find in all the diseases to which this hydræmic condition of the blood is peculiar (leukæmia, pernicious anæmia, nephritis, chlorosis), that the consequent inflammatory manifestations are exhibited in the fundus oculi. Hoffmann, therefore, concludes that such an inflammation had occurred in the optic nerves of the case described, and next inquires as to what part in the course of the nerve-trunk has been affected. He excludes the anterior section, and thinks that the part just passing through the optic foramen is probably especially liable to be affected in such cases. He would explain the sudden nature of the blindness by the sudden occurrence of œdema in the nerve, leading to ultimate constriction where the canal is narrow.

Ulrich is of opinion that the papillo-retinitis, sometimes following great loss of blood, is the result of disturbances of the circulation in the peripheral termination of the optic nerve. He believes that these disturbances are traceable to a suddenly occurring disproportion between blood-pressure and vitreous-pressure due to the rapid loss of blood. He describes the case of a young woman, anæmic from hæmatemesis. On examination the fundus was normal, except slight pallor of the disc. Two days later renewed bleeding from the stomach occurred, and a few minutes thereafter the ophthalmoscope showed the following condition. The papillæ were very pale, sharply defined, very slightly cupped; the arteries were small, not well filled, and difficult to trace towards the periphery; the veins on the retina were normal except in being

* Hoffmann, F. W.—A Case of Amaurosis after Hæmatemesis. (Zehender's *Klin. Monatsbl. für Augenheilk.*, May 1883.)
Ulrich, Dr. R.—A new Ophthalmoscopic Appearance after Loss of Blood. (*Ibid.*)

somewhat over-full, but at the edge of the papilla they suddenly lost their dark red colour and looked clear red, as if they continued their course as arteries. This change of colour on the papillæ, due to diminished filling with blood, was shown by all the retinal veins of both eyes. At a short distance from the edge of the disc there were numerous retinal hæmorrhages, some of them evidently in relation with the larger venous branches and surrounding them like a sheath. There were also several shining white spots visible. The macula lutea was very distinct and dark, while round it were radially disposed fine white glossy lines, like minute cracks, somewhat like those found in retinitis albuminurica, but situated further from the macula. On account of the feeble condition of the patient, the vision could only be roughly tested. She could count fingers. When the hæmorrhages had ceased to recur, and when the pulse had improved, these appearances in the fundus soon vanished, mere traces being left of the white spots and the retinal hæmorrhages. The vision and field were then quite normal.

He explains this case as follows. From the sudden loss of blood in the already anæmic woman, a considerable diminution of blood-pressure was produced, which showed itself in the veins. Since the vitreous-pressure was normal, there consequently ensued a disproportion between it and the blood-pressure in the retinal veins to the disadvantage of the latter. This disproportion led to a compression of the veins generally, and especially at the point of their passage over the edge of the choroidal aperture to enter the substance of the papilla, which was itself deprived of its normal plumpness. In consequence of this there occurred a venous congestion peripherally from the edge of the papilla, and thereupon retinal hæmorrhages took place.

Should the impediment to the circulation of the blood occur in the centre of the papilla, the hæmorrhages and white patches would be situated in its substance, and would readily present the ophthalmoscopic appearance of papillitis such as is described after hæmorrhage. Further observation must show whether this theory be right or wrong, and whether there may not possibly be occasional accidental anatomical differences in the optic nerve-entrance, predisposing in one case to hæmorrhagic retinitis, in another to papillitis. R. MARCUS GUNN.

ARTICLE 2493.

CROFT ON THE TREATMENT OF CANCEROUS OBSTRUCTION OF THE ŒSOPHAGUS BY PERMANENT CATHETERISM.

MR. CROFT contributes, in the *St. Thomas's Hospital Reports*, Vol. xii., a very interesting paper on this subject. Permanent catheterisation of the œsophagus was brought prominently into notice by the paper read by Krishaber at the International Medical Congress of 1881. The treatment was also strongly advocated by Mr. Durham in an instructive discussion at the Clinical Society on Mr. Golding-Bird's cases of gastrostomy. Mr. Croft's remarks are based on two cases of cancer of the œsophagus thus treated, which have lately been under his care at St. Thomas's Hospital.

The first case was that of a woman, aged 45, who had had difficulty of swallowing for three months. She could not swallow solids, and liquids regurgitated to a great extent. Attempts had been made to pass bougies, without success. A small hard lump could be felt in the left side of the neck, in the situation of the thyroid body. She was hollow-cheeked and losing flesh. After several trials a tube of the size of No. 5 catheter (English gauge) was passed, and retained four days; and then No. 8, and subsequently Nos. 12 and 16. The last was not well tolerated, and No. 8 was found to cause the least irritation. She was fed through the tubes, and greatly improved in condition. Two and a half months later the breathing became affected, and tracheotomy was performed. She now wore both a tracheal and an œsophageal tube. She died suddenly in the night, 149 days after the œsophageal tube was inserted, from the accidental slipping out of the tracheal cannula. The growth was found to be an epithelial cancer, invading the top of the œsophagus and the back of the trachea just below the cricoid cartilage. There was no ulceration, nor any signs of the tube having irritated the growth; nor was the stomach ulcerated.

The second case was that of a man, aged 42, who had suffered for upwards of five months. He was unable to swallow any solid, and scarcely any liquid food, and was pale, emaciated, hollow-cheeked, and faint on sitting up. The obstruction was at the gastric end of the œsophagus, and hitherto attempts at passing tubes had failed. Mr. Croft was more successful, for although he, too, could not pass a tube, he succeeded under chloroform with a fine bougie, of the size of No. 6 catheter. The next day a tube of the same size as the bougie was successfully passed, and through it the patient was carefully fed. The tube was changed every four or five days. In a week the patient could swallow fluids by the side of the tube, and rapidly gained flesh. At the end of a month the tube was left out for twenty-four hours, and the patient was able to take a meal of fish and vegetables easily without it. After the second month he began again to decline in strength, and died of extension of the cancer and implication of the liver, pancreas, lungs, and lymphatic glands, after having worn the tube almost continuously for 108 days.

As in the treatment of stricture of the urethra, tubes of different materials, sizes, and shapes should be at hand; so that, if one fail, another can be tried. Sizes No. 6 and No. 8 are best tolerated. They should be changed every four or five days, and thoroughly disinfected, so as not to introduce into the stomach agents of putrefaction; and whilst *in situ* should be closed by a plug of cotton-wool, or otherwise, to prevent the entrance of air. Mr. Croft thinks the tubes are better introduced by the mouth than by the nose, as recommended by Krishaber, as their passage can be better helped by the finger at the back of the mouth. The tube should not be passed far into the stomach, as this is apt to cause retching. The only complaint in either case was of some irritation at the back of the tongue after the tube had been worn eight or ten days. In the first case, no sign of irritation whatever was discovered at the *post mortem* examination; in the second case, the cancer had extended to the lungs, and was there found to be broken down and suppurating. Mr. Croft does not think that this was due to the tube; and no food was found in the suppurating mass in the lungs. The author concludes from the experience gained by these cases that the passage of tubes is not intrinsically

dangerous; that they may be used for epithelial cancer, either at the upper or at the lower end of the œsophagus; that they may be passed when gastrostomy is not likely to prove successful, or may be useful as a preliminary to gastrostomy when the low state of the patient will not admit of the latter being performed; and that they may be worn indefinitely as long as the patient lives.

W. J. Walsham.

Article 2494.

TORSELLINI ON THE COMPARATIVE ACTION OF THE VARIOUS ALKALOIDS OF ACONITE ON THE HEART.

Torsellini (*Boll. delle Scienze Med. di Siena*, and *Gazz. Med. Ital. Prov. Venete*, March 1) has very carefully studied the action of these alkaloids with special regard to their action on the heart, and publishes the result of his researches in the *Boll. delle Scienze Med. di Siena*. His experiments were made on the hearts of frogs and toads, either after separation from the body or with the organ *in situ* but exposed by dissection. After describing minutely the technique of his experiments, he gives the results obtained; 1. with the heart removed from the body; 2. with the heart *in situ*. 1. With the heart removed, nitrate of aconitin causes a slight retardation of the heart-beats; it displays a certain action on the intensity of the cardiac systole, some contractions being scarcely marked, alternating with others of normal intensity; it does not disturb the rhythm as regards the succession of the contractions. Nitrate of napellin does not cause retardation of the cardiac beats; it induces a diminution in the systolic rise and irregularity of the rhythm. Nitrate of lycoctonin causes, with an action contrary to that of aconitin, a slight increase in the number of cardiac contractions; again, contrary to aconitin and napellin, it gives rise to a slight increase in the systolic elevation, and does not in any way disturb the regularity of the cardiac contraction; the cardiac contractions rendered irregular by napellin are again made regular by a current of serum containing nitrate of lycoctonin, and this fact he repeatedly confirmed, ascertaining at the same time that this regularity was obtained, when it did not follow the prolonged passage through the heart of normal serum, that is, not containing lycoctonin. The action of aconitic acid on the heart is quickly and evidently paralysing, and this even with very small doses, which were not sufficient to acidify the liquid. It is here worthy of note that sometimes after this paralysing effect of aconitic acid was manifest, the heart again contracted after passing through it for some time a current of simple serum; and when this did not happen, the contractions certainly returned when nitrate of lycoctonin was added to the serum. 2. As to the results obtained when the heart was left *in situ*, nitrate of aconitin causes a marked diminution in the number of cardiac contractions, very slight but transitory diminution of the systolic elevation of the tracing, and no irregularity of the rhythm. Nitrate of napellin causes the cardiac rhythm to be irregular, renders the systolic elevation of the tracing smaller, and increases the number of contractions. Nitrate of lycoctonin, contrary to the other two alkaloids, does not in the least disturb the heart; and the tracing appears most regular, with slight increase of the systolic rise. From these experiments it results, then, that the various alkaloids of aconite have different action on the heart, which sometimes seem to be antagonistic. This fact explains the great uncertainty of the galenical preparations of aconite, which must vary in action according as one or the other alkaloid predominates, and accounts for the employment of aconite in many diseases with its subsequent discredit and abandonment. Torsellini thinks the time come for a more exact clinical study, now that the chemistry of the plant and its alkaloids is better understood. The great utility of aconite, affirmed by some observers and denied by others, in certain affections of the heart, especially in certain neuralgiæ—for example, angina pectoris, for which Gübler recommends aconite—may well be the consequence of the employment of drugs of different composition: in one preparation napellin, for instance, may have predominated, in another lycoctonin—alkaloids which have now been shown to have a contrary or even antagonistic action.

G. D'Arcy Adams, M.D.

Article 2495.

CUTTER ON THE THERAPEUTIC USE OF HOT WATER.

The therapeutic use of hot water is interestingly discussed in an article by Dr. Ephraim Cutter, in *Gaillard's Medical Journal*. The article begins with a summary of the history of this now fashionable proceeding. It originated in 1858 with Dr. James N. Salisbury, who undertook a series of extended experiments with a view to demonstrating the correctness of the theory, on the strength of which the practice is based. Its object is to remove from the stomach the results of processes complicating digestion, but necessarily a part of it, the principal of these processes being fermentation. The results of fermentation in the stomach are acetic, butyric, hydrosulphuric, lactic, and saccharic acids, and sulphide of ammonium, vegetations, and yeasts. The absorption of these give rise to a variety of constitutional disturbances, which may even result in organic trouble, the seat of this organic trouble being the lungs, the liver, and the kidneys, or other organs. It is probably generally well known that Dr. Salisbury associates the absorption of these products of fermentation very directly with the causation of phthisis pulmonalis; and it is upon the assumption of this connection of cause and effect that he bases his well-known treatment of this disease by raw meat diet and copious washings of the stomach with hot water. Dr. Cutter is an enthusiastic disciple of Dr. Salisbury, and has done probably more than Dr. Salisbury to familiarise the profession with the latter's peculiar views and practices. The article gives explicit directions for the carrying out of this hot water treatment.

1. The water must be hot—not cold or lukewarm. The reasons for this are principally that cold water depresses, and that lukewarm water excites vomiting. By hot water is meant a temperature of 110° to 150° Fahr., such as is commonly liked in the use of tea and coffee.

2. As to the quantity of water: The commencing amount should not be less than half a pint, which amount must be gradually increased with the capacity of the patient, until the specific gravity of the urine stands at 1015 to 1020, the best standard

of health. If, on examination of the urine, the specific gravity stand at 1030, more hot water should be drunk. On the other hand, should it fall to 1010, the amount should be decreased.

3. The time for taking hot water is an hour or two before each meal, and half an hour before retiring.

4. The water should not be drunk too fast. It should rather be sipped, so that the stomach may not be so rapidly distended as to make it feel uncomfortable.

5. The length of time during which this hot water treatment should be continued is six months, this time being usually required to thoroughly wash out the liver and the intestines.

6. Should it be desired to add to the palatability of the hot water, it may be medicated with clover blossoms, tea, ginger, lemon juice, sage, salt, and even occasionally sulphate of magnesia. When the thirst is intense, a pinch of chloride of calcium or nitrate of potash may be added.

7. The amount of liquid to be drunk at a meal should not exceed eight ounces. This amount should not be exceeded, in order that the gastric juice may not be unduly diluted, or that the contents of the stomach may not be prematurely washed out.

The following is a summary of the general conclusions on the therapeutical drinking of hot water as given by Dr. Cutter. He alleges that it is the foundation for all treatment of chronic diseases. It excites downward intestinal peristalsis. It relieves spasm or colic of the bowels by applying the relaxing influence of heat inside the alimentary canal, just as heat applied outside the abdomen relieves. It dilutes the ropy secretions of the whole body, and renders them less adhesive, sticky, and tenacious. It is an inside bath. It dissolves the abnormal crystallised substances that may be in the blood and urine. It washes down the bile, mucus, yeast, and waste, and thus leaves the stomach fresh and clean for the function of digestion. It promotes elimination everywhere.

It is necessary, in conducting this treatment, that the stomach should be rid of the hot water before meals, and this for reasons which are too obvious to require mention.

The editor of the *Therapeutic Gazette* thinks it possible that Dr. Cutter has attached undue value to this means of cure, but cannot dispute the fact that the number of cases to which it is applicable is great. He thinks it peculiarly applicable in the case of those who habitually gorge themselves, and whose systems are always overloaded with matter which the emunctory organs, constantly overtaxed, are unable to eliminate from the system. The thorough washing out which copious draughts of hot water would favour, must be very beneficial in cases of this kind.

ARTICLE 2496.

LIGATURE OF THE COMMON ILIAC ARTERY.*

IN the *Centralblatt für Chirurgie*, No. 10, 1884, may be found the report of a successful ligation of the primitive iliac artery for aneurism of the internal iliac, by Professor Schoenborn, in which the catgut ligature and antiseptic precautions were employed. In 1883, Dr. Packard recorded a fatal instance, with a statistical table of sixty-seven cases, in the first volume of the *Transactions of the American Surgical Association*: and Dr. Kümmell reported to the twelfth Congress of the German Surgical Society one recovery and one death from his own practice, along with an analysis of sixty-two cases. Having made a careful examination of these papers, and added other examples which have escaped the notice of these surgeons, we are enabled to lay before our readers the results of seventy-nine cases, which do not, however, include those of Beugnot, Dumreicher, Lemprière, and Medoro, the original references to which are inaccessible.

Grouping the cases into four classes, we find that the vessel has been tied for the following conditions. First, for hæmorrhage, whether primary or consecutive to the ligature of other trunks, or during the performance of other operations, twenty-eight times, of which four recovered, and twenty-four, or 85·71 per cent., died. The operators were Baudelocque, Blandin, Brainard, Buck, Busch, Carr, Czerny, De Lisle, Edwards, Gibson, Gilpin, Garviso, Hamilton, Holt, Ingram, Kümmell, Liston, McKee, McKinley, A. B. Mott, Mowret, Packard, Parker, Pirogoff, Post, Uhde, and von Langenbeck.

Secondly, for the cure of aneurism forty-three times, with fifteen recoveries and twenty-eight deaths, or a mortality of 65·11 per cent. The operators were Barbosa, Barral, Baxter, Bickersteth, Briarly and Hammond, Caldas, Cock, Crampton, Cutter, D'Almeida, Garviso, Goldsmith, Gouley, Hargrave, Hey, Hunter, Isham, Jones, Knorre, Ladureau, Lange, Luzenberg, Lyon, Maunder, Mayo, A. B. Mott, V. Mott, Nicoladoni, Peace, Pitta, Richter, Salomon, Sands, Schoenborn, H. Smith, Stephen Smith, Stevens, Stone, Sulzenbacher, Syme, Van Buren, and Widderburn.

Thirdly, for pulsating tumours simulating aneurism five times, of which one recovered, and four, or 80 per cent., died. The operators were Baker, Guthrie, Meier, Moore, and Stanley.

Fourthly, as a preliminary step to prevent hæmorrhage during the removal of a tumour or amputation at the hip-joint three times, of which all were fatal. The operators were Bünger, Bushe, and Chassaignac.

With such a gloomy record before us, namely, a mortality of 74·68 per cent., we cannot endorse the view of Packard that it would probably be sound surgery to resort to preliminary ligation of the common iliac artery to prevent hæmorrhage in amputation at the hip; nor can we agree with Kümmell, who holds that the procedure is preferable to ligation of the external iliac, for aneurism of that vessel seated high up, and of the femoral artery, because it is far less liable to be followed by gangrene of the lower limb than the latter operation.

* *Philadelphia Medical News*, April 5, 1884.

SURGERY.

RECENT PAPERS.

2497. JUNKER.—Sudden Death during, but not from, Chloroform Narcosis. (*Lancet*, Jan., p. 10.)

2498. VAN DER MEULEN.—Treatment of Fractured Patella by Wire without Opening the Knee-joint. (*Lancet*, March, p. 518.)

2499. HARDIE.—A Case of Dislocated Shoulder and Simulated Rupture of Axillary Vein. (*Lancet*, March, p. 386.)

2500. Smith. — Aseptic Washing of the Bladder. (*Lancet*, March, p. 520.)

2501. Puzey.—A Case of Large Salivary Calculus. (*Lancet*, March, p. 424.)

2502. Rayner.—Injury to the Median Nerve. (*Lancet*, March, p. 467.)

2503. Kingsbury.—Cold and Position in Strangulated Hernia. (*Brit. Med. Jour.*, March, p. 538.)

2504. Fowler.—Successful Case of Operation for Strangulated Hernia in a Patient, aged 68. (*Brit. Med. Jour.*, March, p. 555.)

2505. Bog-moss as a Dressing for Wounds. (*Brit. Med. Jour.*, Feb., p. 280.)

2506. Cayley.—A Large Urinary Calculus. (*Indian Med. Gazette*, January.)

2507. Böing.—Complete Dislocation of the Scapula. (*Berliner Klin. Wochensch.*, Oct. 22, 1883.)

2508. Braun.—Disturbance of Circulation and Innervation in Excision of the Knee-joint. (*Centralbl. für die Med. Wiss.*, Oct. 20, 1883.)

2509. Landau.—Calculus formed on a Ligature. (*Deutsche Med. Wochensch.*, March 20.)

2510. Weinlechner.—Congenital Dislocation of the Knee. (*Wien. Med. Blätter*, March 20.)

2511. Billroth.—A Case of Excision of the Humerus. (*Wiener Med. Blätter*, March 20.)

2512. Petersen.—Treatment of Ingrowing Toe-nail. (*Deutsche Med. Wochensch.*, March 27.)

2513. Jakovleff, M. P. — Central Osteo-angiosarcoma of the Humerus. (*Vratch*, No. 2, 1883, pp. 20–23.)

2514. Filatoff, A.—On the Treatment of Strangulated Hernia by Ether Irrigation. (*Meditzinsk. Obozren.*, 1884, Fasc. 3, pp. 267–68.)

2515. Putiloff.—On the Use of Reindeer Tendons in Surgical Practice. (*Russkaia Meditzina*, 1884, No. 5, pp. 118–19.)

2516. Kunz.—Rupture of the Bladder. (*Centralbl. für Chir.*, April 4.)

2517. Delens.—Traumatic Separation of the Lower Epiphysis of the Femur. (*Arch. Gén. de Méd.*, Nos. 3 and 4, 1884.)

2518. Enterectomy and Enterorrhaphy in Gangrenous Hernia. (*Med. News*, March 15.)

2519. Mollière.—Anæsthesia by the Administration of Ether by the Rectum. (*Lyon Méd.*, April.)

2520. Catuffe. — Albuminuric Periostitis. (*Union Méd.*, April.)

2521. Drinkwater.—Gangrene of the Lung treated by Incision and Drainage.

2522. Transfixion of the Heart: Recovery. (*Edin. Med. Jour.*)

2523. Page.—Results of Amputations at the Newcastle Infirmary.

Art. 2497. *Junker on Sudden Death during, but not from, Chloroform Narcosis.*—Dr. Junker, in the *Lancet*, Jan. 1884, p. 10, records the case of a man who died during the administration of chloroform under the following circumstances. Professor Bardeleben, of Berlin, was called to treat the patient, who was suffering from a fracture of the neck of the femur. After three or four minutes, having only had three drachms of the anæsthetic, the patient suddenly ceased to breathe, and almost immediately afterwards the heart stopped. Everything was done to restore life without avail. Professor Bardeleben at the time thought death was due to fatty embolism, and the *post mortem* examination verified the correctness of the diagnosis. The vessels of the lungs, particularly the capillaries, were filled with minute particles of fluid fat, which, conglomerating, opposed a mechanical impediment to the circulation. The result of this was anæmia of the lungs and hypercarbonisation of the blood. Thus, by the insufficient quantity and the bad condition of the blood, the brain, the heart, and lungs were rendered unfit to carry on their functions. In cases of fracture or other injury of the long bones, especially the femur in its upper third, there is great risk of fatty embolism.

2498. *Van der Meulen on Suture of Fractured Patella by Wire without opening the Knee-joint.*—Dr. Van der Meulen, in the *Lancet*, March 1884, p. 518, refers to an article in the *Lancet*, Jan. 1880, p. 30, in which he details a successful case of suture of a transversely fractured patella without opening the knee-joint. In three cases the author has done this with complete success. It is stated that, in the majority of these cases, if we wait from ten to twenty days after the injury, there will be found a thin but distinct membrane between the posterior edges of the fragments, separating the space between the fragments from the cavity of the joint. This membrane is formed by the partial organisation of the blood-clot, and with care the fractured bones can be drilled and brought together without rupturing this posterior membrane. The wound must be dressed antiseptically, and kept in plaster bandages for some weeks after the operation.

2499. *Hardie on a Case of Dislocated Shoulder and Simulated Rupture of Axillary Vein.*—Mr. Hardie, in the *Lancet*, March 1884, p. 386, publishes an interesting case of a woman, aged 72, who sustained a fall on her left shoulder. There were the usual signs of subcoracoid dislocation, but in the mid-axillary line, opposite the fourth rib, a soft ill-defined tumour, as large as an orange, was detected. An attempt was made to reduce the dislocation by the thumb in the axilla; but on trying to do so the tumour rapidly increased in size, and the veins over the shoulder became very tense. The diagnosis arrived at was probable rupture of the axillary vein, and amputation of the shoulder-joint was resolved upon; consent, however, could not be obtained, and the following morning the dislocation was reduced without chloroform, there being no further swelling. Fortunately for the patient, the error in diagnosis was not acted upon; the real condition probably being rupture of some large artery in the axilla, causing the rapidly growing tumour, and, by pressure on the vein, the dilatation of its branches.

2500. *Smith on Aseptic Washing of the Bladder.*—Dr. Solomon Smith, in the *Lancet*, March 1, 1884, p. 520, describes an apparatus by which water flows into the bladder from a reservoir held aloft, so that, by the alternate compression of two India-rubber tubes, a flow of water can be made to pass in and out of the bladder without the admission of any air. A small T-shaped junction-pipe is required. One arm of this is connected by means of a tubing with the reservoir of water, the other is fitted close to the end of the catheter, and the descending arm leads into an utensil. To use the apparatus, fill the reservoir with warm water (98° to 99° F.), pass the catheter, slip on to it the short tube, and thus let the urine flow into the utensil; at the same time elevate the reservoir and let water flow for a moment also into the utensil, so as to drive all air from the tubes; then compress the tube leading from the reservoir, so long as urine flows; when this ceases, remove the compression and let water run into the bladder, compressing the tube leading to the utensil; in a few seconds stop the flow of water into the bladder, and let it flow into the utensil. This alternation should continue until

the water which has passed into the bladder comes out clean.

2501. *Puzey on a Case of Large Salivary Calculus.*—Mr. Puzey, in the *Lancet*, March 1884, p. 424, records the case of a woman, aged 35, who had a large mass of tuberculous glands removed from the left axilla; at the same time, there was a swelling in the left submaxillary region. Two years afterwards, this swelling had increased considerably, and an abscess had formed which discharged freely; but the swelling remained larger than before, causing great pain in swallowing. The removal of the gland was decided upon; and, as the operation was almost completed, it was found that the tumour was composed of the submaxillary gland and its dilated and hypertrophied duct, tightly stretched over a salivary calculus. The calculus was of a pale buff colour, and weighed 115 grains. It was of light specific gravity, being 1½ inches long, an inch broad, and half an inch thick. It was composed for the most part of phosphates of lime, soda, and magnesia. [Besides cases of salivary concretions noted in the *Medical Digest*, sect. 810: 5, one is reported in the *Brit. Med. Jour.*, Jan. 1883, p. 53, and in the *Lancet*, July 1883, p. 55; the latter almost equalling in size the one reported by Mr. Puzey.—*Rep.*]

2502. *Rayner on a Case of Injury to the Median Nerve.*—Mr. Rayner, in the *Lancet*, March 1884, p. 467, publishes a case of injury to the median nerve, treated by operation four months after the original injury. A boy, aged 15, received a severe cut in the front of the left wrist from the bursting of a soda-water bottle. The wound was dressed, and healed in about three weeks. About two months afterwards, weakness with loss of sensation in the left hand was noticed; this continued so as to abolish the use of the thumb and two outer fingers. After four months from the date of the injury, the patient consented to an operation. Mr. Rayner cut through the old scar, and found the median nerve. It was traced from above downwards till it was seen entering the cicatrix, which appeared firmly united to it all round, and was then freed with a few touches of the scalpel. A large portion of the surrounding cicatrix was cut away, and the edges of the wound were united, a skein of catgut ligatures being left as a drain. Within three weeks the patient could tell when the fingers were pricked with a pin; in five weeks he could turn the handle of the door. Two years afterwards Mr. Rayner saw his patient, who said that 'one hand was as good as the other,' though it was fully twelve months before sensation and power of movement were completely restored.

2503. *Kingsbury on Cold and Position in Strangulated Hernia.*—Dr. G. C. Kingsbury, in the *Brit. Med. Jour.*, March 1884, p. 508, draws attention to the combination of cold and position in the treatment of hernia. In two cases of strangulated hernia, lately treated by Dr. Kingsbury, the patient was placed in bed, the foot of which was raised high enough to rest on an ordinary chair, and an India-rubber bag full of ice was placed over the tumour. Previously to this, taxis had been attempted, together with warm baths, opium, and chloroform, without effect. After waiting an hour with the bed raised up, taxis was again tried, when the tumour went back almost immediately.

2504. *Fowler on a Successful Case of Operation for Strangulated Umbilical Hernia in a Patient 68 Years Old.*—Mr. Trevor Fowler, in the *Brit. Med. Jour.*, March 1884, p. 555, publishes notes of a case of strangulated umbilical hernia in a very stout lady, aged 68. There had been signs of strangulation for twenty-four hours when Mr. Walsham was consulted, and an operation was decided upon. Mr. Walsham made a longitudinal incision over the hernia about three inches in length in the mesial line, and, after cutting cautiously down upon the sac and opening it, the seat of stricture was reached and cut through, and the bowel returned. The greater portion of the original tumour, consisting entirely of omentum, was removed in separate pieces, each piece being first ligatured with carbolised catgut. The wound was dressed with eucalyptus gauze, and the patient was kept well under opium for some days, making a good recovery, with a radical cure of the hernia.

2505. *Bog-moss as a Dressing for Wounds.*—In the *Brit. Med. Jour.*, Feb. 1884, p. 280, an article draws attention to the virtues of dried black peat as an antiseptic application to wounds; this is due in part to the extraordinary power of absorption possessed by the bog-moss of which peat is almost entirely composed. There are several species of *sphagnum*, the plant composing the moss of peat.

2506. *Cayley on a Large Urinary Calculus.*—Mr. H. Cayley, in the *Indian Med. Gazette* for Jan. 1884, gives an account of a case of calculus occurring in a native, aged 50. Lateral lithotomy was attempted, but could not be executed on account of the great depth of the perinæum, and the large size of the calculus. The calculus was afterwards extracted by the suprapubic operation. When removed, it weighed 25½ ounces. The patient died two days after the operation. RICHARD NEALE, M.D.

2507. *Böing on Complete Dislocation of the Scapula.*—Dr. Böing, of Dinslaken, reports to the *Berlin. Med. Wochensch.* of Oct. 22, 1883, a case of complete dislocation of the scapula which occurred in his practice. The patient had been caught by the projecting handle of a wheel, and pressed against the edge of an iron upright belonging to the machinery, which had inserted itself under the inferior angle of the scapula, and had pushed the bone forwards under the pectoralis major. When first seen, the patient had a decided hollow where the right scapula with its muscles ought to have been, and the bone was entirely covered by the pectoralis major, only the tip of the inferior angle being discovered on careful palpation. There was no cutaneous wound, only a red mark where the edge of the upright had pressed. The hand could be pushed under both the latissimus dorsi and the pectoralis major, but the only place where tenderness was complained of was the inferior angle in the before-mentioned position. Reduction was easily effected by raising the arm, the trunk being firmly fixed, and using the acromion as a fulcrum, when the scapula slipped suddenly back to its normal position, with the same sound as when a joint is put into place. No muscular laceration could be made out. The first rib was then found to be fractured about the middle, evidently from muscular action, as the fragments projected outwards, and it could not have been the result of direct violence. The fracture caused a wound of the lung, which set up traumatic pneumonia, but in sixteen days the patient was able to go about again, and in a month he was back at work.

2508. *Braun on Disturbance of Circulation and Innervation in Excision of the Knee-joint.*—The

Centralbl. für die Med. Wissenschaften, of Oct. 20, 1883, contains an article by Dr. Braun on a cause of disturbance of circulation and innervation in cases of excision of the knee-joint. His patient, a girl, aged 21, had the operation performed on account of fungous disease of the joint, and the bones were united by two catgut sutures. A few hours after the operation, the toes began to turn blue, and symptoms of gangrene necessitated amputation above the knee on the tenth day. The sharp edge of the sewn surface of the tibia was found to have compressed the popliteal artery, so that a small portion of the vessel had become gangrenous, and a thrombus had formed in it. The tibial nerve was also crushed in such a way that only a sac of neurilemma, filled with pus, united the two extremities. Braun considers that the rarity of this complication is due to the fact that the operation is usually performed on children, in whom the difference between the two cut surfaces of bone is not so great as in adults. He recommends that the femoral surface should be placed far back upon the tibial, and fixed in that position by a long nail, the posterior edge of the tibia being rounded off. A very tight bandage is, of course, to be avoided.

2509. *Landau on a Calculus Formed on a Ligature.*—In the Berlin Medical Society, on March 12 (*Deutsche Med. Wochensch.*, March 20) Dr. Landau exhibited a calculus which he had removed from the bladder of a woman, who had undergone ovariotomy two or three years ago, had suffered from parametritis some months afterwards, and soon afterwards from vesical trouble. The calculus was found to have formed round a ligature which had been used in the ovariotomy, which must have entered the bladder through a small opening in the walls, and have remained there long enough to form the nucleus of the stone.

2510. *Weinlechner on Congenital Dislocation of the Knee.*—At the meeting of the Imperial and Royal Medical Society in Vienna, on March 14 (*Wien. Med. Blätter*, March 20), Prof. Weinlechner showed a child who had been born with a dislocation of the knee, the tibia being dislocated forwards on the femur. This form of congenital dislocation is very rare, having been observed only three times previously by Dr. Weinlechner. The treatment is to reduce the dislocation, and to fix the knee by plaster or other bandages ; but the cure is not usually complete, the ligaments being too much stretched, and, even in the more favourable cases, a support of some sort has to be worn.

2511. *Billroth on a Case of Excision of the Humerus.*—At a meeting of the Imperial and Royal Medical Society of Vienna (*Wiener Med. Blätter*, March 20) Prof. Billroth showed a patient, aged 20, from whom the whole right humerus had been removed soon after the age of 12, on account of disease of the bone, the whole shaft being spongy throughout. The periosteum was carefully left intact, but the bone did not form again. In spite of this, the forearm was well developed, and, by means of an ingenious splint, and an artificial shoulder-joint, the patient could use his arm and hand well.

2512. *Petersen on the Treatment of Ingrowing Toe-nail.*—Prof. Petersen, of Kiel, communicates to the *Deutsche Med. Wochensch.* of March 27, his method of treatment in cases of ingrowing toe-nail. He removes the whole of the soft parts down one side of the nail, extirpates the nail itself, from antiseptic motives, and, after arresting bleeding by pressure, dresses the wound rapidly with oxide of zinc and cotton-wool. Fourteen days' rest in bed, with the foot raised, generally suffices for cure, and the contraction of the cicatrix prevents a relapse to the old condition. Prof. Petersen prefers general to local anæsthesia, on account of the troublesome bleeding afterwards ; and for the same reason he does not approve of Esmarch's bandage in this operation.

ALICE KER, M.D.

5213. *Jakovleff on Central Osteo-angio-sarcoma of the Humerus.*—In the *Vratch*, No. 2, 1883, p. 20, Dr. M. P. Jakovleff, of Professor N. V. Sklifosovsky's clinic in Moscow, furnishes details of a case of central osteosarcoma of the humerus, which simulated an aneurism. The tumour belonged to the category of new growths, described by Waldeyer as angiosarcomata. The patient, aged 42, began to suffer from 'rheumatoid' pain in the left arm about seven months before his admission. Soon afterwards there appeared a swelling, the growth of which went on rapidly during the last three months. On examination, the middle part of the left humerus was found to be occupied by a spindle-shaped tumour, having 28 centimètres in its largest circumference. Its ends blended evenly with the healthy portions of the shaft of the humerus. The skin was normal, and freely movable. The tumour was painless and hard, except in two circumscribed spots, at which it was soft, like paste. Over the whole surface of the new growth there was heard a blowing *bruit* ; and a distinct pulsation, synchronous with the cardiac beats and radial pulse, was felt. On compression of the axillary artery the pulsation disappeared, and the tumour diminished in its bulk (after three minutes' compression its largest circumference lost two centimètres). There were no retardation of the left radial pulse, no enlargement of lymphatic glands, no arterio-sclerosis. Professor Sklifosovsky's diagnosis of central osteosarcoma was founded upon a rapid growth of the neoplasm, upon a direct and complete blending of the latter with the healthy bone above and below, upon the integrity of the brachial artery, the synchronism of the radial pulses, and the absence of any signs of arterio-sclerosis. The limb was amputated at the shoulder-joint ; the wound healed by the first intention. The microscopic examination confirmed the diagnosis. The tumour contained an enormous quantity of blood-vessels, which in many spots formed large blood-cavities of irregular outlines.

2514. *Filatoff on the Treatment of Strangulated Hernia by Ether Irrigation.*—In the *Meditzinsk. Obozren.*, Fasc. 3, 1884, p. 267, Dr. A. Filatoff, of Riajsk, furnishes another instance of the successful treatment of incarcerated hernia after Finkelnstein's method. A right inguinal hernia, of the size of a large fist, in a strong patient, aged 55, was spontaneously reduced within twenty minutes after a single irrigation. The incarceration lasted about two days, and resisted taxis and the treatment by posture.

2515. *Putiloff on the Use of Reindeer Tendons in Surgical Practice.*—In the *Russkaia Meditzina*, No. 5, 1884, p. 118, Dr. Putiloff, of Omsk, Siberia, recommends threads made of reindeer tendons (used by Ostiaks for sewing their boots, coats, &c.), as a substitute for catgut in surgical practice. The author tried this material (after treatment by ether, to remove fatty acids, and by a 5 per cent. solution of phenol in absolute alcohol) in a case of epithelioma of the lower lip. The sutures underwent

complete absorption by the end of three days. As the author states, the strength of these tendon-threads is very considerable. The price of the article is extremely low. V. IDELSON, M.D.

2516. *Kunz on Rupture of the Bladder.*—The *Centralblatt für Chirurgie* of April 4 contains an abstract by Dr. Richter, of Breslau, of a pamphlet by Dr. H. Kunz on rupture of the urinary bladder. Reports are given in the pamphlet of two cases of this injury from the practice of Hahn, of Berlin. The first case was one of a woman who, in a fall forwards, had struck her abdomen violently against the ground. A catheter was introduced, and about a drachm and a half of urine withdrawn from the bladder. The patient died suddenly two days after admission. The *post mortem* examination revealed signs of peritonitis, and a rent about an inch and a quarter in length in the posterior wall of the bladder. The walls of this viscus were rather thin. The subject of the second case was a man who, in a state of extreme intoxication, and with his bladder full, had been ejected from an underground shop. When first seen by Hahn, two days later, the abdomen was much distended, quite dull in its peripheral parts, and decidedly fluctuating in the middle line up to a point just below the umbilicus. There was no vomiting, and no complaint of pain in the abdomen. The temperature was normal. The patient had not passed any urine since the accident. On the third day, a small quantity of clear though blood-stained urine was drawn off through a catheter. The extent of the dulness was then much reduced. Twenty-two hours later, more urine was drawn off through a catheter, and the dulness quite disappeared. The temperature, which had been slightly subnormal, now sank to 96° F. On the following day the urine was dark-coloured and turbid, and contained much pus. The temperature continued to fall, and on the fifth day the patient died. At the *post mortem* examination three pints and a half of purulent fluid, with a slight urinous odour, were found in the abdominal cavity. The posterior wall of the bladder presented a wound about the size of a three-mark piece, which opened freely into the peritoneal cavity. With the exception of a small quantity of blood-stained fluid in each pleural cavity, and of some hæmorrhagic infiltrations in the lungs, there was an absence of marked conditions in all the other organs. Dr. Kunz analyses 156 cases of laceration of the bladder not due to the direct action of the injuring agent, as for instance, in wounding by projectiles and fragments of bone. Most of these cases are taken from the well-known paper of Max Bartels on 'Wounds and Ruptures of the Bladder.' In thirteen only of these cases were the patients of the female sex. Recent statistics, it is stated, prove that in the majority of cases the rupture is intraperitoneal. Originally the rent is always linear. If on *post mortem* examination some other form of perforation be found, as, for instance, a circular orifice, such condition, Kunz states, is the result of changes that have taken place after the injury, either before or subsequently to death. There is invariably but one rent in the coats of the injured bladder. Of the undoubted cases of intraperitoneal rupture, in one only can it be positively asserted that the treatment was successful. In this case, laparotomy was performed. Kunz thinks that there may have been a second case. Eight instances have been recorded of recovery after extraperitoneal rupture. In cases of extraperitoneal lesion, Kunz would recommend the use of a retention-catheter and the injection through this of warm water into the bladder and, when possible, into the surrounding infiltrated connective tissue of the pelvis. If it be clear that the urine has been effused mainly between the bladder and the wall of the abdomen, then the latter should be incised. If in the course of the case infiltration of urine be manifested in any other part, incision must be made. In intraperitoneal rupture, if the patient be seen early and before the occurrence of peritonitis, the abdominal cavity should be opened, the effused urine and blood completely removed, and the wound in the bladder closed by sutures.

2517. *Delens on Traumatic Separation of the Lower Epiphysis of the Femur.*—The following conclusions are given at the end of a contribution by M. E. Delens, of Paris, to the *Archives Gén. de Méd.*, Nos. 3 and 4, 1884. Traumatic separation of the inferior epiphysis of the femur is observed almost exclusively in lads, especially in those between the ages of 10 and 18 years. This divulsion is usually caused by forcible extension of the limb, combined or not with torsion and tearing. The posterior ligament of the knee-joint plays in the mechanism of this fracture a part analogous to that of the anterior ligament of the radio-carpal joint in fracture of the lower extremity of the radius. The separation occurs in most cases at the diaphysal limit of the cartilage of conjugation, and is frequently accompanied by separation of a thin layer from the extremity of the diaphysis. Traumatic divulsion of the inferior epiphysis of the femur has sometimes been confounded with luxation of the knee. Among the primary complications, one of the most frequent and most serious is perforation of the skin by the projected extremity of the diaphysis. If this osseous extremity cannot be reduced, the surgeon should at once perform resection of the diaphysis. Primary amputation should be reserved for cases in which there is laceration of the popliteal artery. Secondary amputation is sometimes rendered necessary by gangrene of the limb, or by some other serious complication. Resection of the extremity of the diaphysis allows preservation of the limb, and does not prevent complete re-establishment of the movements of the joint. Subsequent lengthening of the femur in growth, though much influenced, is not arrested by this resection.

2518. *On Enterectomy and Enterorrhaphy in Gangrenous Hernia.*—In an editorial article in the *Medical News* of March 15, on the management of the gangrenous intestine in cases of strangulated hernia, it is stated that in 1873 Lücke revived the practice of drawing down and resecting the dead gut along with its attached mesentery, re-establishing the continuity of the canal by appropriate sutures, and then returning the parts into the abdominal cavity. This procedure, which appears to have been lost sight of from 1846 to 1873, has been practised during the past ten years at least sixty-seven times. Of these sixty-seven cases, collected by Reichell of Breslau, Bouilly of Paris, and Ill of Newark, U.S., in twenty-one the treatment resulted in complete cure; whilst two patients recovered with artificial anus, and forty-four, or 65·67 per cent. died. As might naturally be expected, it is stated in the *Medical News*, peritonitis was the cause of the fatal issue in the majority of cases; and the mortality is twice as great as that following resection and suturing of the gut for artificial anus. This difference may, however, be readily accounted

for if the condition of the intestine in the two lesions be considered. In gangrenous hernia, the divided ends of the gut are very liable to be œdematous, ecchymosed, and inflamed, and are thus rendered soft. In resection for artificial anus, on the other hand, sound intestine is divided and sutured. In performing the operation, the following points should command the most careful attention. '1. To prevent effusion, the lumen of the gut must be temporarily occluded. This may be accomplished by a provisional catgut or silken ligature, but this method is open to the objection of its throwing the intestine into folds, which interfere with the proper insertion of the sutures. The occlusion may be effected with a clamp or forceps, or, still better, with the fingers of assistants. 2. If gangrenous, a triangular portion of the mesentery should be removed, and the edges united by suture after the vessels have been secured; if sound, it may be ligatured in mass. In either event, the mesentery must not be separated from the bowel beyond the points of severance of the latter, lest gangrene of the edges of the wound ensue. The gut should be divided at a right angle to its axis, unless one end is smaller than the other, when the cut should be made at an acute angle. 3. The most important step of the operation is the insertion of the sutures, the material for which should be pure silk soaked in a solution of corrosive sublimate. The safest and most efficient mode of uniting the severed ends of the gut is with what is known as the Czerny-Lembert suture. This consists of an inner row of sutures, which are inserted at a distance of one-eighth of an inch from one another, and which include all the coats of the bowel, and an outer row in which the sutures are not so close together, and each of which includes the serous coat only. If the mucous membrane should protrude too much, as it may through the retraction of the muscular coat, it should not be cut off on a level with the latter, but the inner row of sutures should be applied in such a way as to exclude it. Finally, the accurate approximation of the edges of the wound would be greatly facilitated if the first suture be inserted on the mesenteric side of the intestine, and the second at a point directly opposite.' The chief cause of failure after the operation being the damaged condition of the gut in the immediate vicinity of the gangrenous portion, it is recommended that the intestine be resected through a sound and undisturbed portion, and beyond the seat of infarctions and effusions. It is stated that cases do as well after resection of eight or ten inches as after the excision of two or three inches. In the present state of our knowledge we can scarcely determine, as is stated in the *Medical News*, whether circular resection and suturing of the gut in gangrenous hernia present any advantages over an attempt to form an artificial anus. Although Billroth and other German surgeons favour the latter practice, it would be wise, it is thought, to resort to enterectomy and enterorraphy, provided sound portions of the gut be selected for resection. If successful, the recovery is absolute; if it fail, and the patient survive with an artificial anus or fæcal fistula, the condition is not worse than if the operation had not been practised.

W. Johnson Smith.

2519. *Mollière on Anæsthesia by the Administration of Ether by the Rectum.*—The author has tried this method at the suggestion of Dr. Axel Yversen, of Copenhagen, and a note published in the *Lyon Médical* (April 1884) shows that it is well worthy of a trial. In the first case, that of a woman, aged 20, ether was thrown into the rectum by means of Richardson's apparatus; in five other cases, an India-rubber tube of the size of the finger was introduced into the rectum and put in communication with a bottle containing ether; the bottle was placed in warm water (50° C.), and the vapour of ether gradually passed into the rectum. Whenever the tension of the vapour reached a certain point, part of it escaped through the anus. After five to ten minutes, the patients complained of drowsiness and of a taste of ether in the mouth. Complete anæsthesia could be produced in this way, but it was generally found advisable to let the patient inhale a few grammes of ether. A very small quantity is sufficient, and there seems to be no period of excitement; another advantage is that full play is given to the surgeon when operating on the face.

2520. *Catuffe on Albuminuric Periostitis.*—This rare affection, first described by Ollier, has been recently studied by the author, who states (*Union Méd.*, April 1884) that it is a subacute inflammation most frequent in young adults, and characterised by the formation of a greenish-yellow fluid containing albumen, paralbumen, lime-salts, and sometimes sugar. The exudation, which is most common in the neighbourhood of the joints, is often accompanied by pseudoneuralgic pains. The treatment consists in compression, counter-irritation, aspiration of the fluid, or incision.

J. S. Kaeser, M.D.

2521. *Drinkwater on a Case of Gangrene of the Lung treated by Incision and Drainage.*—In the *Transactions of the Northumberland and Durham Medical Society*, Dr. Drinkwater (of Sunderland) reports the case of a gentleman, aged 63, who after suffering from acute bronchitis in the autumn, and harsh dry cough in the spring, began to expectorate foul purulent mucus in the following autumn. On December 5, 1881, he complained of the sudden onset of an acute cutting pain at the upper left front. The expectoration was blood-stained; there were dulness, deficient expansion, and abolition of vocal resonance from the apex to the third rib; and there was a loud blowing murmur over the tricuspid area. On the previous day there was no dulness. Signs of gangrene subsequently developed; and continued fever, with nocturnal elevations, profuse perspiration, and anorexia rapidly reduced the patient's strength. In the first week of January (1882) a firm painless swelling was observed in the subclavicular region; on January 16 deep fluctuation could be felt; on January 18 there was superficial emphysema, and a free incision was made through the skin, and a quantity of very offensive air escaped. The pus was found under a layer of adipose tissue, beneath the pectoralis major; it was fœtid and discoloured. A drainage-tube was passed through a small circular foramen in the intercostal space. The symptoms were not permanently relieved, and by the middle of March the patient was apparently passing into a hopeless condition. On March 22 Dr. Drinkwater enlarged the old wound, divided the intercostal muscle outwards for an inch and a half, removed one and a quarter inches of the third rib, and broke up the upper portion of the lung (which was gangrenous and pulpy) with the finger and with the handle of the bistoury: a drainage-tube of $\frac{3}{8}$-inch diameter was introduced, and passed for two inches horizontally backwards within the thoracic wall, and therefore into the lung

substance. Twenty-four hours after the operation the temperature had fallen to 100°, the pulse was 105, the respiration 34. The tube was removed and cleaned twice a day, and a small quantity of a solution of permanganate of potash, or carbolic acid, cautiously injected with very little force. The discharge gradually diminished, and became simply purulent, without offensive smell. After September, the tube could no longer be passed through the intercostal space, and by the end of November the wound had entirely healed. The patient gained flesh with rapidity, and was on December 6, 1883, 'almost as well as he had been for a year or two' before this illness. Considerable falling in of the clavicular region had occurred, and the apex of the lung appeared to be one large cavity. [The case is one of great interest. It was peculiarly well adapted for treatment by incision, owing to the clear demarcation of the area of lung involved and to its situation at the apex, which very much facilitated drainage; probably also the pleural cavity was obliterated at the apex both before and behind, and this would materially diminish the small amount of mobility naturally observed at the apex. The difficulty of diagnosing the precise position of an abscess in other parts of the lung, of finding it with the knife or trocar, and of draining it when found, have hitherto limited the application of this operation.]

2522. *Supposed Transfixion of the Heart: Recovery.*—An anonymous writer records in the *Edinburgh Medical Journal* a case of punctured wound of the heart, with recovery. The patient was an elderly lady, confined in an asylum on account of pronounced suicidal tendencies. One evening, just after going to bed, she became suddenly and violently ill, and when the medical assistant arrived she was unconscious, with pale, cold, clammy skin and widely dilated pupils; the head was rolled rhythmically from side to side, and she moaned at times. The radial pulse (78) was weak on the right side, and almost imperceptible on the left; the left arm and leg were quite paralysed, so far as could be made out, but the right arm was occasionally moved in a feeble and aimless way; she had vomited a little. It was found that a large steel shawl-pin, about $3\frac{3}{8}$ inches long, had been thrust into the chest at the situation of the apex-beat with a direction upwards and inwards; the part imbedded measured about $2\frac{3}{4}$ inches. The withdrawal of the pin was followed by marked improvement in the pulse, but præcordial pain and urgent dyspnœa remained for about one hour; after that interval the paralysis of the left side had disappeared, the pulse was 108, steady, and stronger, and she was quite conscious. She made a good recovery, and when the report was written, some months after the incident, no trace of the injury could be detected. [The report does not quite conclusively show that the pin transfixed the heart; no mention is made of any movement communicated to the pin by the cardiac contractions. With regard to the curious unilateral distribution of the nervous symptoms, it may be remarked that the patient had a strong neurotic history, having suffered severely from neuralgia for a long period before the onset of the suicidal melancholia.—*Rep.*]

DAWSON WILLIAMS, M.D.

2523. *Page on the Results of Amputations at the Newcastle Infirmary.*—Mr. Frederick Page gives statistical tables as to the results of major operations at the Newcastle Infirmary before and after the antiseptic treatment had been adopted, and he compares his figures with those published by Professor Lister under similar conditions. Before the antiseptic treatment was adopted, the mortality after amputations was, in Professor Lister's wards in the Royal Infirmary in Glasgow, for the years 1864 and 1866, 45·7 per cent., and the deaths in the Newcastle Infirmary for the same period were slightly higher. According to tables published by Professor Lister in 1879, the mortality after amputations performed in the Edinburgh Royal Infirmary was at the rate of only 7·8 per cent. for amputations for disease, and the total percentage for both disease and injury was a little above 11 per cent. Comparing this striking alteration with the results of the change of treatment which was adopted somewhat later at the Newcastle Infirmary, it appears that the mortality there after major amputations performed during the four years and nine months from April 1878 to December 1882 showed practically the same improvement; indeed, the percentage is somewhat lower, being only 10·6 per cent. for both disease and injury. But the tables of antiseptic amputations performed between Jan. 1 and Dec. 31, 1883, are more satisfactory still; for in this past year the total number of primary amputations was twenty-three, *without a single death*, and out of twenty-five cases of amputation for disease three only died; and these three cases were—1, an amputation at the hip-joint in a man over 50 years of age exhausted by suppuration; 2, removal of the upper arm in a patient, aged 77, with bed-sores from old standing disease; and 3, a case of senile gangrene of both feet in an old man with extensive calcareous arteritis, who had just had typhus fever. These results are due primarily to the method of treatment, and not to the general hygienic improvement in the wards; for cases which are still treated as they would all have been ten years ago develop the same symptoms of constitutional disturbance as before. Mr. Page adds: 'But it must not be forgotten that excellent results from amputation have been obtained under other systems of dressing. Mr. Callender's amputation statistics are as good as, if not better than, any which have been published since his day. Syme had twenty cases of amputation of the thigh for disease dressed with dry lint, and no death. Spence performed sixty-three major amputations, and lost only three. Is the explanation of this success to be found in the care bestowed individually by these surgeons, in personally carrying out the details of their treatment?' After pointing out some of the difficulties of the Listerian theory, Mr. Page concludes: 'Whether, however, the theory be altogether true or not, so long as the practice of the system leads to such results as forty-five out of forty-eight major amputations recovering in the Newcastle Infirmary, no one dying from blood-poisoning, I imagine Lister's method of dressing wounds will not be abandoned.' WALTER PYE.

MEDICINE.

RECENT PAPERS.

2524. BLOCH, J. M.—On the Treatment of Intestinal Obstruction by Electricity. (*Vratch*, 1884, No. 3, pp. 38–39.)

2525. POLAK.—On Unusually Slow Action of the Pulse. (*Medycyna*, and *Vratch*, No. 4, 1883, p. 59.)

2526. UGHETTI.—Note on the Epidemic of Cerebro-spinal Meningitis in Misterbianco from March to

May 1883. (*Gazzetta della Reale Soc. Ital. d'Igiene*, Anno v., Nos. 10 and 11.)

2527. CONTI, L.—Hydatid Cyst of the Liver: Suppuration of the Cyst, Communication with the Intestine, Evacuation of the Hydatid; Cure. (*Lo Sperimentale*, Oct. 1883.)

2528. SUÑER, ENRIQUE.—Dislocation of the Liver. (*El Genio Medico-Quirurgico*, March 22, 1884.)

2529. BURGER, PROF., AND POULET, DR.—Whooping-cough; its Micro-organism, and Treatment by Antiseptics. (*Berlin. Klin. Wochensch.*, and *Le Scalpel.*)

2530. AMPUGNANI.—On the Mobility of the Dulness in the Exudation of Pericarditis. (*Italia Medica*, and *Gazz. Med. Ital. Prov. Venete*, March 8, 1884.)

2531. EGAR.—Suppression of Urine from Stone in both Ureters. (*Deutsche Med. Wochensch.*, Feb. 28.)

2532. SLADE-KING AND MICHELL.—Epidemic Pneumonia. (*Practitioner*, April 1884.)

2533. DUCKWORTH.—On Subcutaneous Rheumatic Nodules. (*Clin. Soc. Trans.*, Vol. xvi. Reprint.)

2534. GUELLIOT.—Acute Infectious Purpura. (*Revue de Thérap.*, No. 6, 1884.)

2535. MACNAMARA.—Asiatic Cholera. (*Brit. Med. Jour.*, March, p. 502.)

2536. FARQUHAR.—The Connection between Malarious (non-tropical) Disorders and Stricture of the Urethra. (*Brit. Med. Jour.*, March, p. 507.)

2537. RUSSELL.—Micro-organisms in Purpura Hæmorrhagica. (*Brit. Med. Jour.*, March, p. 507.)

2538. HARTNOLL.—Scarlatina and Diphtheria. (*Lancet*, March, p. 538.)

2539. ROBINSON.—Foot-and-Mouth Disease in the Human Subject. (*Lancet*, March, p. 484.)

ART. 2524. *Bloch on the Treatment of Intestinal Obstruction by Electricity.*—In the *Vratch*, No. 3, 1884, p. 38, Dr. J. M. Bloch, of Homel, details the case of a patient, aged 24, who suffered from constipation of eight days' standing, an enormous flatulent distension of the belly, vomiting, and hiccough, and in whom the cure was obtained from galvanisation after other means (purgatives, large and effervescent enemata, &c.) had failed. The current was supplied by a Störer's battery of 16 or 12 cells, the anode (an œsophageal probe) being introduced high up into the rectum, and a cathode applied alternately to different points of the abdominal wall. The duration of sittings varied from twenty to ten minutes. Galvanisation was repeated six times; four times at intervals of about three hours, during the first day of the treatment, and twice during the second. Hiccough disappeared after the first sitting; defæcation followed about six hours after the fourth. Dr. Bloch is inclined to think that obstruction depended upon coprostasis. In an editorial note, Professor V. A. Manassëin states that he had already for many years successfully employed faradisation in cases of habitual constipation from atony of the abdominal wall and muscular coat of the bowels.

2525. *Polak on unusually Slow Action of the Pulse.*—Dr. Polak (*Medycyna*, and *Vratch*, 1883, No. 4) reports the case of a patient with insufficiency of the cardiac valves and arterio-sclerosis, in whom the pulse was not more frequent than 19 or 20 per minute. [A similar extraordinary case has been reported by Mr. Charles Boyce in the *Brit. Med. Jour.*, March 8, 1884, p. 455.—*Rep.*]

V. IDELSON, M.D.

2526. *Ughetti on an Epidemic of Cerebro-spinal Meningitis.*—The author was appointed with Prof. Ronsisvalle to investigate an epidemic of cerebro-spinal meningitis in Misterbianco. Misterbianco is a small town of 7,000 inhabitants, in the province of Catania, on the south-eastern slope of Mount Etna. The epidemic is considered to have begun on March 7, 1883, though one case was observed on Jan. 16. From March 7 to May 24 twenty-one cases occurred. Besides these, three other cases took place, one in August, one in September, and one in October. Of the 21, 17 were male, and 4 female. In 16 cases (*i.e.* 76 per cent.) the disease proved fatal. The attack generally began without premonitory symptoms. Fever, preceded by cold and accompanied by headache and by contraction of the cervical muscles, rapidly seized the patient. Sometimes the pulse was only a little above the normal, and not at all in proportion to the high temperature. Occasionally herpes appeared on the lips. In the cases that died speedily, excitement soon gave way to depression. In the others, irregularity of progress was almost characteristic. Unlike other epidemics, vomiting was generally absent. Tetanic spasm of the muscles of the neck was almost constant, and the spasm frequently extended to the extensors of the spine. In only one case was there any disturbance of hearing. Double converging strabismus was often noticed. In one case, ulcerative keratitis was observed. In reference to causation, the author dwells on the fact that about forty years ago various circumscribed epidemics like the present one occurred. Catania is a malarial district, and Misterbianco is not remarkable for its excellent sanitary arrangements. The author does not think the disease spreads from person to person, and he believes that the infective agent is active only for brief periods, and at distant intervals. The male sex suffers chiefly; children a few months old, and young men between twenty and thirty, are most liable to the disease. In the inflammatory exudation, in the blood, and in all the tissues, numerous micrococci were found; but these organisms did not appear to have any specific character, and inoculations with them (in rabbits) failed entirely.

WILLIAM R. HUGGARD, M.D.

2527. *Conti on Hydatid Cyst of the Liver.*—Dr. L. Conti reports this case in *Lo Sperimentale* of October 1883. E. M., aged 60, an officer, a strong, robust man, had always enjoyed good health until 1882, when he began to suffer from symptoms of gastric catarrh, with attacks of violent pain in the hepatic region, simulating hepatic colic from the passage of biliary calculi; these attacks were accompanied by symptoms of perihepatitis, fever, and jaundice, with enlargement of the liver. No tumour could be felt. In the last attack the prostration was profound, with constant vomiting and obstinate constipation. After some days the bowels acted; the motions were seen to be mixed with pus, and on washing and straining the motions an empty echinococcus cyst, of the size of an orange, was found. Vomiting and pain soon ceased, and the liver quickly decreased in size, and no inequality of its surface could be recognised. Fever and diarrhœa, with symptoms of septic poisoning, continued for a long time. The cyst must have been situated on the under surface of the liver, and probably opened into the right curvature of the colon, which is in immediate relation with the liver.

2528. *Suñer on Dislocation of the Liver.*—Dr. Enrique Suñer, in the *Genio Medico-Quirurgico*, March 22, reports an interesting case of dislocation of the liver. F. B., aged 43, married, with two

children and four abortions, had suffered from paludic remittent fever; her history was otherwise good. She was a hard worker, having often to lift and carry heavy weights. She had suffered for seven years great pain in the epigastric region, and noticed that this part became swollen. She had pain also sometimes in the abdomen, with sensation of weight on the right side, and was unable to sleep on the left side. Four years ago she noticed a tumour on the right side of the abdomen, which sometimes was painful. The bowels acted naturally; the urine was normal; the menses were scanty and irregular; the spleen was slightly enlarged. The skin and sclerotic were subicteric. There was chloasma in the face. In the heart and jugular veins anæmic murmurs were to be heard. The coverings of the abdomen yielded easily to pressure; there was no fat; the right side was larger than the left. In the epigastrium a small spheroidal tumour could be felt; in the umbilical region, chiefly to the right side, a larger tumour could be felt; these tumours were connected; the surface of the tumour was smooth; it was movable, especially to the right, and it could be pushed up into the right hypochondrium. There was no liver-dulness in the right hypochondrium. The ascending colon lay to the right of the tumour, the transverse colon passed below it. Below, and on the left side of the tumour, could be felt on deep pressure its sharp border, with two depressions, one corresponding to the interlobular division of the liver and about seven centimètres lower, another which corresponded to the depression of the gall-bladder. The gall-bladder itself could not be well made out, probably because the border of the liver was curled in front of it. This curling of the edge of the displaced liver helped to establish the diagnosis from other tumours. Most authors attribute this dislocation to pregnancy with pendulous belly, the *uterus en besace*; in the majority of cases there has been extreme flaccidity of the abdominal walls, anæmia, and want of adipose tissue. In this case there had been simultaneous enlargement of the liver and spleen from old intermittents. Dr. Kispert considers the following as causes of this dislocation; 1. Former pathological states of the liver, as enlargement with subsequent diminution, the ligaments thus losing their natural elasticity; 2. Anæmia and other constitutional affections; 3. Gestation and other mechanical causes; 4. Pendulous abdomen. Points of diagnosis are, a tumour in the centre and right side of abdomen with the characteristics of the liver; tympanitic sound on percussion between this tumour and the lung; the above-mentioned curling or folding in of the borders; this symptom has not been mentioned by any other author. The dislocation, though painful, is quite compatible with life. The pain and distress occasioned by it can be much lessened by the reposition of the liver in its normal situation, and the adjustment of a bandage or belt.

2529. *Burger and Poulet on Whooping-cough; its Micro-organism, and Treatment by Antiseptics.*—The micro-organism of pertussis was described by Letzerich and Tschamer, but the researches of these authors have escaped the observation they deserved. The recent studies of Burger, of Bonn (*Berlin. Klin. Wochensch.*), show that the micro-organism of pertussis is visible with a power of from 340 to 600 diameters, appearing as little rods of unequal size. With a higher power it is seen that the rods have the 'biscuit' form. The groups of bacteria are irregularly disseminated or disposed in line, and somewhat resemble the *leptothrix buccalis*. The method of preparation is very simple. A small quantity of the expectoration is pressed between two cover-glasses, exposed to the flame of a Bunsen burner to coagulate the albumen; the colouring matter is then added (watery solution of fuchsin or of methyl violet), and it is then washed thoroughly in water, or the colouring matter removed by washing in alcohol, the bacteria alone remaining coloured. These bacilli are not found in any other expectoration; they are so abundant that it is difficult to contest their action; their frequency is always in direct relation with the intensity of the disease; the course and symptoms of the disease are clearly explained by the action of these micro-organisms. Although pertussis is clearly an infectious disease, it cannot yet be affirmed that the bacillus is the true carrier of the infection, since cultivations and successful inoculations are still wanting. Dr. Poulet (*Le Scalpel*) has also confirmed the presence of a special micro-organism in the sputa of pertussis, and therefore recommends the antibacteric treatment. He directs the patient to be kept in a room in which there is an antiseptic atmosphere, so as to hinder the development of the micro-organism. He causes to evaporate over a suitable fire the following mixture: spirit of thymol, 10 grammes; alcohol, 250 grammes; water, 750 grammes. The vapours so produced are diffused in the air and penetrate the respiratory tracts. Internally he uses indifferently syrups of tar, thymol, carbolic acid, eucalyptol, pinus maritima, turpentine, &c. He says that, when there are no complications, all these substances have an analogous action, and that the pertussis is cured in fifteen to twenty days. When there are bronchial or broncho-pulmonary complications the improvement is slower, the antiseptic atmosphere must be maintained, and emetics and expectorants prescribed.

2530. *Ampugnani on the Mobility of the Dulness in the Exudation of Pericarditis.*—Gerhardt lays it down as a rule that the dulness of the exudation of pericarditis increases considerably in its superior limits directly the patient from the supine assumes the erect position; this is still more evident when he bends forward the upper half of the body—a fact which he makes to depend on a larger quantity of liquid being brought into contact in this position with the thoracic wall. Observations in the clinic of Prof. Maragliano (*Italia Medica*) show that this change of position of the dulness does not take place in all cases; indeed, in some, precisely the contrary happens, *i.e.* a lowering of the site of dulness. The author gives six cases in proof of this. Of these, the first and second are especially noteworthy, as in them he was able to follow the development of the exudation. At first, on change of position, there was the usual elevation of dulness, succeeded by fall of dulness as the exudation increased. This would only depend on lowering of the diaphragm from the excessive weight of the contents of the pericardium, and at the same time was noticed the diminution or disappearance of the semilocular space of Traube. Elevation as well as fall of the dulness may then occur, or there may be no variation. If the liquid contained in the pericardium be much, there may be moderate elevation of the superior limits; if it be very abundant, there is always a depression of the line of dulness, and both of these independently of the greater or lesser antiquity of the exudation.

G. D'ARCY ADAMS, M.D.

2531. *Egar on Suppression of Urine from Stone in both Ureters.*—Dr. Egar, of Breslau, reports to the *Deutsche Med. Wochensch.* of Feb. 28, a case of ten days' suppression of urine, from stone in both ureters. The patient was a man aged 59, who had suffered from calculus in childhood, with occasional renal colic during the last twelve years, tenderness on pressure being felt over each kidney alternately. On Nov. 10 a stone was passed, with pain on the left side, and after four days' rest the pain began again, and no urine was passed from the 14th until death on the 24th. The patient vomited on the first evening of the attack; again on November 22, after a very hearty meal; and again on the evening of the 23rd; but at no other time during the illness. The subjective symptoms were good until two days before death; the appetite remained till the last, no headache being complained of at all. Convulsions first occurred on the 23rd, after the first restless night, and there was no sweating or diarrhœa throughout. At the necropsy, each ureter was found obstructed by a stone, firmly impacted, and completely filling up the lumen of the tube; and the parenchyma of the kidneys was somewhat degenerated, gravel being found in both pelves. The absence of pain seems to be explained by the low secreting power of the kidneys, preventing an accumulation behind the obstructions; but the prolonged absence of all uræmic symptoms is very remarkable, and makes the case one of great interest. The author confesses himself to be totally unable to give any explanation of it.

ALICE KER, M.D.

2532. *Slade-King and Michell on Epidemic Pneumonia.*—Dr. E. Slade-King and Mr. Sloane Michell report (*Practitioner*, April 1884) a very interesting epidemic of pneumonia which occurred in the Great Torrington Rural Sanitary District in the spring of last year. This district is in North Devon; the population is healthy and generally engaged in agriculture, and the sanitary conditions are satisfactory. The reporters mention six groups of cases, in each of which the cases following the primary one occurred in persons who had been in close contact with the disease. In group No. 1, Mrs. B., the mother, received the infection from one daughter and conveyed it to another. In Group 2, Jane D. infected her daughter and her mother, who, in turn, infected her husband, and they infected the paid nurse. In three instances the period of incubation appeared to be about seven days.

2533. *Duckworth on Subcutaneous Rheumatic Nodules.*—Subcutaneous nodules have attracted a good deal of attention, and were the subject of an excellent communication by Drs. Barlow and Warner in the *Transactions of the International Medical Congress*, 1881 (Vol. iv., p. 116). They are usually spherical or oval, but sometimes disc-shaped, with well-defined margins; of firm consistence, elastic, and not altered by pressure. They are never adherent to the skin, and are often, to a certain extent, movable upon the tissues beneath them, from which they grow. These tissues are superficial aponeuroses, tendons, ligaments, or periosteum. The skin over them is usually normal, but may be reddened. They may be painless. They usually develop rapidly and last a few weeks or months, but in some cases they may last for more than two years. They are often arranged symmetrically. They are composed of embryonic tissue, or in other cases of wavy fibrous tissue (Fowler) and tissue like fibro-cartilage (Angel Money). In many cases, but not always, they are associated with rheumatism. Dr. Duckworth's paper (*Transactions of the Clinical Society*, Vol. xvi.) contains notes of four cases. The first is remarkable for the age of the patient (24), the absence of definite rheumatic history, and the duration of the nodules (twenty-five months), at the end of which time they were *in statu quo*. In the third case there was a history of a rash, like measles, and sore-throat, having preceded the development of the nodules and this fact is collated with Dr. S. Mackenzie's case, in which syphilis was present (*Clin. Soc. Trans.*, Vol. xvi., p. 188). In this case the nodules had lasted two years and eight months, and the patient's age was 38. All four were females, and three had cardiac disease. Dr. Duckworth thinks that the type found in young persons constitutes a class apart, the nodules appearing suddenly and passing away in a few weeks. Dr. Duckworth recollects seeing a case fifteen years ago, and finds one recorded by Dr. Hillier in his book on *Diseases of Children*, p. 238, 1868.

ROBERT SAUNDBY, M.D.

2534. *Guelliot on Acute Infectious Purpura.*—Three cases of this rare disease have been observed by the author at Rheims, and are reported in the *Revue de Thérap.*, 1884, No. 6. The affection is epidemic and attacks children, killing them with great rapidity. It is characterised by symptoms of cerebro-spinal irritation, and by an eruption of purpura on the skin. The best treatment seems to be ice on the spine and hypodermic injections of morphia. J. S. KAESER, M.D.

2535. *Macnamara on Asiatic Cholera.*—Mr. C. Macnamara, in the *Brit. Med. Jour.*, March 1884, p. 502, publishes a lecture on Asiatic cholera. Within thirty-three years, *i.e.* from 1830 to 1864, epidemic cholera extended from India to Europe and America on four different occasions, but since the establishment of the international sanitary service in 1866 no epidemic outburst of cholera, such as those which had previously occurred, has visited this Continent. The author speaks strongly against the conduct of the English Government in the last outbreak of cholera in Egypt in 1883, when they stated that, according to the experience of Sir Joseph Fayrer, Dr. Cunningham, and Sir W. G. Hunter, cholera could not be carried from one place to another by means of human beings, or by merchandise travelling in vessels, or in any other way. They stated that quarantine was unnecessary, and that sanitary measures were the only efficacious means of impeding the march of an epidemic. Thus the experience of such men as Dr. Parkes, Mr. Simon, and others is set aside as altogether worthless. Mr. Macnamara believes that Asiatic cholera has invariably extended from India over the world along the lines of human intercourse, and that the disease, therefore, is a communicable one. It is only by the means of well-advised quarantine measures applied to vessels from infected ports that an epidemic of cholera can be warded off; and when it exists, in an epidemic or any other form, in a country, there is one, and only one, way of averting its fatal effects, and that is by preventing the water and food which people consume from being contaminated by the organic matter passed by patients suffering from the disease. This infecting matter may retain its deadly influences if kept in a dried condition (as on soiled clothes) for years; but

if it pass into water containing elements which are probably essential to its development, it bursts forth into rapid growth. Fortunately, the life of this organic matter is of short duration, and it dies in a few days. No amount of cleanliness, drainage, or any other means will preserve a community from epidemic cholera if the food or water people consume be contaminated by the dejecta of cholera patients; and, on the other hand, no amount of filth, overcrowding, or other unwholesome conditions can produce epidemic cholera if the organic infecting matter be kept out of the food and water. [A large mass of strangely contradictory observations regarding the contagiousness of cholera and the value of quarantine may be readily consulted by referring to sections 558 : 4 and 916 : 4 of the *Medical Digest.*—*Rep.*]

2536. *Farquhar on the Connection between Malarious (non-tropical) Disorders and Strictures of the Urethra.*—Dr. J. Farquhar, in the *Brit. Med. Jour.*, March 1884, p. 507, contributes an addendum to Dr. Ward Cousins's paper on the connection between malarious disorders and stricture of the urethra in the *Journal* of Feb. 1884, p. 356; details of a case are given. The patient consulted Dr. Farquhar for illness in which ague seizures appeared to lead up to, and culminate in, an attack of stricture of the urethra. During the three years preceding this, the patient had, on four occasions, attacks of lumbago, accompanied with a certain degree of nephritis, more severe in every succeeding attack. In the third attack there was a slight paroxysm of ague; and when on the fourth occasion the shivering reappeared, the character of the disease dawned on the author, and a history of the case elicited the fact that, more than forty years before, the patient had ague when living in the fens of Lincoln. Until the last attack there had been no difficulty in micturition, only a temporary suspension of the secreting power of the kidney during the attacks; but now symptoms of acute stricture set in, and the patient was almost moribund before a No. 3 metallic catheter was introduced into the bladder. A flexible one was afterwards tied in, and gradual recovery followed.

2537. *Russell on Micro-organisms in Purpura Hæmorrhagica.*—Dr. W. Russell, in the *Brit. Med. Jour.*, March 1884, p. 507, refers to the discussion raised at the Pathological Society on Feb. 20 by Mr. Watson Cheyne's communication on micro-organisms in purpura hæmorrhagica. Dr. Russell says that it does not require more than the ordinary amount of clinical acumen on his part, to prove that the phenomena, at the fully developed stage, are only explicable by assuming the presence of a micro-organism. The vessels are blocked by these organisms, and thereby the hæmorrhages, which give the disease its distinctive name, are produced. The routine treatment under which such cases recover, is the administration of turpentine, which is not only a hæmostatic but a parasiticide; this success may be due therefore to the action of the drug on micro-organisms. The author suggests that observations be made on the blood at an early stage of the disease, as pyrexia is present in these cases, before the hæmorrhages are numerous, or become a serious element in the case.

3538. *Hartnoll on Scarlatina and Diphtheria.*—Mr. Hartnoll, in the *Lancet*, March 1884, p. 538, refers to the intimate relationship observed between scarlatina and diphtheria in a recent outbreak of these two diseases which has been prevalent at Poltimore, near Exeter. In a long report Mr. Hartnoll regarded the diseases to be so interlinked as to have a common origin, the form developed in each case depending on obscure local or personal influences. Some persons had a scarlatinal eruption and no sore throat; others had inflamed throats only with here and there a white patch; and others again suffered distinctly from membranous diphtheria.

2539. *Robinson on Foot-and-Mouth Disease in the Human Subject.*—In the *Lancet*, March 1884, p. 484, an article refers to the late outbreak of aphthous sore-throat which has occurred in Dover, and on which Dr. Robinson has made a careful report. From the first, a certain dairy in the town was suspected, but it soon became evident that all the milk sold there was not implicated. The dairyman received milk from other dairy farms than his own; and at one of these it was found that the cows had suffered from foot-and-mouth disease. The cream sold at the Dover establishment was that received from the infected country dairy, and it was amongst the customers of the Dover dairyman, who partook of cream, that the disease was chiefly manifested. The symptoms of those affected were shivering, followed by headache and fever, pains in the limbs, parched lips, and a vesicular eruption on the throat.

RICHARD NEALE, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

2540. CAYLEY.—The Antipyretic Treatment of Typhoid Fever. (*Brit. Med. Jour.*, March, p. 399.)

2541. THOMPSON.—Cascara Sagrada in Habitual and Temporary Constipation. (*Brit. Med. Jour.*, March, p. 556.)

2542. PARSONS.—Treatment of Tinea Versicolor. (*Ibid.*, March, p. 445.)

2543. BEAUMONT.—A Short Analysis of Fifty Cases of Rheumatism treated by the Bath Thermal Waters. (*Practitioner*, March 1884.)

2544. SHELLY.—The Uses of Peroxide of Hydrogen. (*Practitioner*, March 1884.)

2545. BEALE.—Gallic Acid in Hæmorrhage from the Urinary Organs. (*Lancet*, March, p. 466.)

2546. LLOYD.—The Treatment of Erysipelas by White Lead. (*Lancet*, March 1884, p. 413.)

2547. DAY.—White Lead Paint in Erysipelas and Superficial Inflammations. (*Lancet*, March, p. 456.)

2548. LEIDY.—Disguising the Smell of Iodoform. (*Philadelphia Med. Times*, Dec. 15, 1883.)

2549. Administration of Salicylic Acid. (*Med. Times and Gazette*, March, p. 365.)

2550. DRIVER.—Chloral in Persistent Hiccough. (*Brit. Med. Jour.*, March, p. 409.)

2551. GREEN.—The Treatment of Phthisis in the Earlier Stages. (*Lancet*, Jan., p. 149, and Feb. p. 193.)

2552. Condensed Mare's Milk. (*Lancet*, March, p. 478.)

2553. BLAKE.—The Action of the Salts of Lime, Strontium, and Baryta, on the Heart. (*Practitioner*, March 1884.)

2554. Cider as a Preventive of Stone. (*Brit. Med. Jour.*, February, p. 281.)

2555. CAMPARDON.—The Treatment of Diabetes Mellitus by Air-Douches. (*Gaz. Hebd. de Méd. et de Chir. Prat.*, No. 13, 1884.)

2556. HAYEM.—Intraperitoneal Transfusion. (*Ibid.*, No. 13.)

2557. Delthill.—The Specific Treatment of Diphtheria. (*Union Méd.*, No. 45, 1884.)

2558. Teissier.—The Treatment of Diabetes by Bromide of Potassium. (*Lyon Médical*, Feb.)

2559. Bouchut.—The Treatment of Diphtheria by Injections of a 5 per cent. solution of Carbolic Acid into the Tonsils. (*Paris Médical*, No. 12, 1884.)

2560. Georgizon, M. P.—On the Value of Crude Petroleum as a Disinfectant and Preserving Agent. (*Arkhiv Veterinarnykh Nauk*, 1883, Dec., pp. 67-86.)

2561. Popoff, J. P.—On the Tubercle-Bacillus and the Action on it of Sulphurous Acid. (*Meditz. Pribavl. k' Morsk. Sborn.*, Feb. 1884, pp. 48-50.)

2562. Sudeikin, N.—On Tartrate of Chinoline and its Therapeutic Value. (*Russkaia Meditzina*, No. 2, 1884, p. 38.)

2563. Guldas, J.—Experimental Investigations into the Action of Tartrate of Chinoline. (*Veterinarnyi Vestnik*, Fasc. 2, p. 17.)

2564. Saltykoff, N. N.—On Alumen Ustum in Intermittent Fever. (*Proceedings of the Caucasian Medical Society*, 1884, Jan. 16, pp. 494-97.)

2565. Savvinsky, Al.—On Alumen Ustum in Intermittent Fever. (*Meditzinsk. Obozren.*, 1884, Fasc. 3, pp. 289-92.)

2566. Steffen.—The Action of Kairin. (*Jahrb. für Kinderheilk.*, Band xxi., Heft 1.)

2567. Schwabach.—Disturbances of Hearing after the Use of Quinine and Salicylic Acid. (*Deutsche Med. Wochensch.*, March 13.)

2568. Finkler and Prior.—A New Preparation of Quinine. (*Deutsche Med. Wochensch.*, Feb. 7.)

2569. Schmidt.—The Treatment of Goître by Cold and Iodide of Potassium. (*Ibid.*, Feb. 21.)

2570. Kassowitz.—The Treatment of Rachitis by Phosphorus. (*Wiener Med. Blätter*, Feb. 7.)

2571. Heubner.—The Hydrotherapic Treatment of Typhoid Fever. (*Ibid.*, March 6 and 13.)

2572. Betz.—Solution of Chloride of Sodium in Hæmorrhage. (*Memorabilien*, and *Wiener Med. Blätter*, March 6.)

2573. Graziadei.—On Kairin. (*Riv. di Chim., Med., e Farm.*, No. 3, 1884, and *Gazz. Med. Ital. Lomb.*, March 15, 1884.)

2574. Charpentier.—Sulphate of Copper in Obstetrics. (*Le Progrès Médical*, 1884.)

2575. Arango, Posada. Nux Vomica as a Galactagogue. (*El Ensayo Médico*, Feb. 1, 1884.)

2576. Douvreleur.—The Physiological Action of Sulphate of Cinchonidine. (*Jour. de Thérap.*)

2577. Borcheim.—Pulsatilla in Acute Epididymitis. (*Jour. of Cutan. and Vener. Diseases*, April.)

2578. McChesney.—Corrosive Sublimate in Gonorrhœa. (*Therapeutic Gazette*, December.)

2579. Hicks.—The Cuca Leaf and its Extracts. (*New York Med. Jour.*, Feb. 23.)

2580. Gamgee.—The Use of Collodion in Acute Orchitis and other Conditions. (*Birmingham Med. Review*, Jan. 1884.)

2581. O'Brien.—The Prolonged Use of Jaborandi in Bright's Disease. (*New York Medical Record.*)

2582. Parish.—Hydrobromic Acid. Squibb.—Hydrobromic Acid (*Ephemeris*).

Art. 2540. *Cayley and others on the Antipyretic Treatment of Typhoid Fever.*—Dr. Cayley, in the *Brit. Med. Jour.*, March 1884, page 399, publishes an abstract of a paper read before the Medical Society of London. Statistics are given showing the decrease in the rate of mortality in typhoid fever since the antipyretic treatment had been introduced. This treatment consists in bathing, sponging, using iced compresses and antipyretic drugs, principally quinine, sometimes salicylate of soda, and latterly kairin. The principal conclusions which the advocates of the antipyretic treatment of typhoid fever believe to be established are these. 1. This mode of treatment fulfils the physiological indications; the febrile metabolism of the tissues, and the accumulation in the blood of the products of this metabolism, are much diminished. 2. It produces a marked alleviation of the symptoms. 3. The complications of typhoid fever are neither rendered more frequent nor more severe. 4. While the rate of mortality in typhoid fever under the old method of treatment is about 19 per cent., under the antipyretic mode it is under 11 per cent. A long discussion followed the reading of the paper, an account of which is given at page 412. Dr. Samuel West questioned the doctrine, that the danger of enteric fever resided in the high temperature alone, and stated that the cold water treatment was most valuable in cases of hyperpyrexia; but, taking cases of typhoid fever as a whole, the success of the treatment depended chiefly on the clinical skill which recognised the proper circumstances for the use of the bath. Dr. Mahomed declared himself an advocate of the cold bath treatment of enteric fever; as did also Dr. Broadbent, who stated that when the temperature reached 102° F., he used sponging; if it remained for twenty-four hours at or above 103° F., he resorted to the cold bath. A leading article in the *Lancet*, p. 422, speaks of the old plan in the days of the saints of putting a patient suffering from fever, under the pump. Then a rebound came, and anything in the shape of a chill was deprecated as likely to send the fever in. In modern days we again apply a treatment similar in its aims to that of our ancestors, which some think may possibly abolish the fever. One aspect of the question has not been discussed at the Society's meeting—that is, the practicability of the general adoption of this plan. In hundreds of homes in the middle classes there is no bath save the morning tub, no proper nurse, no means of lifting the patient in and out of bed into the bath; besides other difficulties which are even met with in hospital practice when this plan is adopted. It is suggested that some means should be invented of applying continuous cold to the surface, without the necessity of taking the patient from his bed. In the *Lancet*, March 1884, p. 449, Dr. Collins writes that he has had experience of the cold bath treatment of typhoid fever, both in the army and in private practice, and has been led to form an unfavourable opinion of it. [A large mass of evidence for and against the use of cold in typhoid and other diseases may be consulted at section 1480 of the *Medical Digest*; and in the *British Medical Journal*, vol. ii., 1883, p. 1124, and vol. i., 1884, pp. 69 and 250, the claims of the new drug kairin as an antipyretic have able advocates.—*Rep.*]

2541. *Thompson on Cascara Sagrada in Habitual and Temporary Constipation.*—Mr. C. E. Thompson, in the *Brit. Med. Jour.*, March 1884, p. 556, writes that he has treated 305 cases of constipation with cascara sagrada. The preparation used was generally the fluid extract of Messrs. Parke, Davis, and Co., combined with liquor bismuthi and bicarbonate of soda. In cases of atonic dyspepsia, with temporary sluggishness of the bowels, two or three tenminim doses were generally sufficient to produce a first evacuation. In confirmed habitual constipation the fluid extract after a time begins to lose its effect, unless given in gradually increasing doses. One

grain of the solid extract, combined with two grains of extract of berberis aquifolium in pill, taken night and morning, is most useful in cases of obstinate constipation, though continued for a period of six months. In a few cases the drug cannot be tolerated, producing griping and exhaustive diarrhœa. It is said to act chiefly by increasing the peristaltic action of the intestines, and it is hoped it may prove useful in certain cases of fæcal retention, due to, or inducing, paralysis.

2542. *Parsons on Tinea Versicolor.*—Dr. J. G. Parsons, in the *Brit. Med. Jour.*, March 1884, p. 445, writes that precipitated sulphur applied to the skin, either by a puff or gently rubbed in with the fingers, gives remarkable results in the treatment of tinea versicolor. The dry powder has several advantages over the sulphur lotion or ointment. In the former the sulphur is applied very irregularly, and does not adhere to the skin; the ointment is greasy, dirty, and easily rubs off, and the skin is protected, rather than otherwise, from the action of the sulphur, by the grease. Dr. Parsons has found this method equally efficacious in the treatment of acne if applied three times a day.

2543. *Beaumont on the Treatment of Rheumatism by the Bath Thermal Waters.*—Mr. Beaumont, in the *Practitioner*, March 1884, p. 190, has collected a series of fifty successive cases which were admitted into the Mineral Water Hospital, Bath. By 'rheumatism' is meant all the diseases usually classed under that term, with the exception of acute rheumatism and rheumatoid arthritis. Of the fifty cases there were thirty-nine males and eleven females, the average ages of the former being 41 years and that of the latter 38. The previous duration of the disease averaged seventeen months per case. The thermal treatment consisted of one bath on alternate days (omitting Sundays), the immersion lasting twenty minutes for each bath. The first few baths were taken at a temperature of 98° F., and, if well borne, during the rest of the treatment the bath was taken at 105° F., unless there were advanced aortic disease; mitral disease rarely debarred from the use of the hot bath. A glass of the thermal water was drunk every morning, besides the use of medicines, liniments, vesication, &c. As to results, the cases are thus divided. Six were discharged 'cured;' thirty-five were 'much better;' six were 'better;' and three were signed 'no better.'

2544. *Shelly on the Uses of Peroxide of Hydrogen.*—Mr. Shelly, in the *Practitioner*, March 1884, p. 196, advocates the use of peroxide of hydrogen as an antiseptic. Its action on pus is rather remarkable. If a few drops of the ordinary 10 per cent. solution be brought into contact with pus, a brisk effervescence at once commences, and continues until all the pus is completely destroyed. Applied on absorbent wool as a swab or temporary dressing to venereal sores, foul or sluggish wounds, and purulent eczematous surfaces; used as an injection for abscess-cavities, purulent ophthalmia, otorrhœa, gonorrhœa, and leucorrhœa; used as a mouth-wash or gargle in cases of dental abscess or caries and simple stomatitis; or directly applied to ulcerated surfaces on the tonsils and pharynx, and as a douche or injection in ozæna, it has yielded most satisfactory results. It is colourless, odourless, cleansing, and stimulating, does not stain or corrode, destroys pus, causes no pain in its application, and is not poisonous.

2545. *Beale on Gallic Acid in Hæmorrhage from the Urinary Organs.*—Dr. Lionel Beale, in the *Lancet*, March 1884, p. 466, writes that gallic acid is one of the most potent styptics in relieving hæmorrhage from the urinary organs. Gallic acid soon passes out of the blood, being carried off in the urine, so that it is only by administering frequent doses that one can compensate for the continual draining away of the remedy. It is most valuable in chronic bleeding from the surface of the mucous membrane of the pelvis of the kidney, ureters, bladder, and urethra, and from villous growths; as well as in the very obstinate hæmorrhage from large fungous tumours of the kidney and bladder. Gallic acid seldom disagrees in any way. It does not cause constipation, nor disturb the stomach. The glycerine of gallic acid is the most pleasant form in which to give the drug, strength 1 in 4. The author has given as much as ten grains every three hours without intermission for three weeks, and no objection was raised by the patient.

2546. *Lloyd on the Treatment of Erysipelas by White Lead.*—Dr. Lloyd, in the *Lancet*, March 1884, p. 413, writes that he has had splendid results in the treatment of erysipelas with white lead paint. Another medical man writes that for years he has used a preparation called 'Wilson's linimentum plumbi lactatis compositum,' not only in erysipelas, but in all forms of irritable skin affections.

2547. *Day on White Lead Paint in Erysipelas and Superficial Inflammations.*—Mr. Day, in the *Lancet*, March 1884, p. 456, writes that for some months past he has been trying various experiments, as to the value of common white paint in the local treatment of superficial inflammations. The most perfect compound is a mixture of white lead, with varnish, linseed oil, acetate of lead, sulphate of copper, and sulphate of zinc.

2548. *Leidy on Disguising the Smell of Iodoform.*—Dr. Leidy, in the *Philadelphia Med. Times*, Dec. 15, 1883, writes that the best substance for disguising the odour of iodoform is oil of citronella. It has the advantage of being very cheap. Two drops to a drachm are sufficient. It may be added to cod-liver oil for the same purpose, when it is used externally. Citronella oil itself, when used externally, is a rubefacient and anodyne.

2549. *Administration of Salicylic Acid.*—In the *Med. Times and Gazette*, March 1884, p. 365, an article appears from Squibb's *Ephemeris* on the administration of salicylic acid. It should be given in full doses until an impression is made, and then in moderate or small doses, frequently repeated, as it is eliminated with great rapidity. Two or three doses of fifteen to twenty grains, with two or three hours intervals, will usually produce its beneficial effects. Then ten grains every two hours, with intervals gradually increasing to three or four hours, will serve to keep up its effects. Full doses of salicylic acid or salicylate of sodium do not interfere with the digestive functions of the stomach, and yet a very small quantity will prevent the action of pepsin. It is very useful as a vehicle for solutions of alkaloids for hypodermic use. A drachm of the acid in a pint of water, to which may be added another pint of water, makes a solution which will remain free from growths of all kinds for an indefinite length of time, and will not be more irritant than when made from water alone.

2550. *Driver on Chloral in Persistent Hiccough.*—Mr. F. J. Driver, in the *Brit. Med. Jour.*, March

1884, p. 409, contributes a case as a commentary on the one quoted in the *Journal*, January, p. 103, of 'persistent hiccough treated by chloral.' Mr. Driver was called to a man, aged 56, who had been troubled with hiccough about every ten or fifteen seconds during three days and nights; he also vomited continually. He had been drinking hard for some weeks. Morphia given hypodermically did little good; then chloral-hydrate, in doses of twenty to forty grains, was given, without the least effect. The author then commenced using large enemata; and, the bowels acting freely, the hiccough was soon relieved. In six days the patient was cured.

2551. *Green on the Treatment of Phthisis in its Earlier Stages.*—Dr. T. H. Green, in the *Lancet*, Jan. 1884, p. 149, and Feb., p. 193, contributes an able lecture on the treatment of phthisis in its earlier stages. By phthisis is meant a more or less chronic pulmonary tuberculosis. Pathology teaches us three factors concerned in the development and progress of this disease; 1. A state of more or less constitutional feebleness, either inherited or acquired, which renders the individual abnormally incapable of resisting injurious influences; 2. Some condition of the higher portions of the lungs—probably a tendency to slowness of the circulation—which favours the development of the phthisical process; 3. The introduction of some organisation from without, probably the tubercle-bacillus. Diet is an important element in the treatment, and it is essential to give the patients something before they are dressed, as breakfast is often their worst meal. A warm cup of chocolate with plenty of milk is a very good substitute for the old plan of rum and milk. In cases where there is recent catarrh of the stomach, carbonate of bismuth in doses of from ten to twenty grains, given half an hour before food, continued for two or three weeks, proves very beneficial, followed by a mixture of gentian and soda, which may be administered for long periods. Cod-liver oil holds a prominent place in the treatment of phthisis. It should be taken after food. Quinine is useful during pyrexial stages, and in women who are worn out by nursing or worry and weak out of proportion to the lung-mischief. To restrain cough, sedatives must only be given during the night. Some such combination as the following is advised: Solution of hydrochlorate of morphia, spirit of chloroform, and ipecacuanha wine, of each three minims; oxymel of squills, or syrup of tolu, twenty minims; gum arabic mucilage, twenty minims; water to one drachm; to be swallowed slowly, and taken three or four times during the night, but to be avoided during the day. To prevent night-sweating, a pill consisting of from a quarter to half a grain of the extract of belladonna, and from two to three grains of oxide of zinc, given at bedtime, is very useful. In cases where there are marked pyrexial attacks, the use of quinine and digitalis is recommended. The question of the effect of climate is touched upon, and two ways are noted in which climate favourably influences the progress of early phthisis—1, by its invigorating effect, and consequent power of improving the general health; 2, by its local influence on the diseased lung. Of these, the former is probably the more important. With regard to the question of destroying the bacillus by inhalation, when the disease is established, the author does not think that antiseptic inhalations have the power of doing this as yet, but hopes that, with the discovery of more perfect methods, this will be possible.

2552. *Condensed Mare's Milk.*—In the *Lancet*, March 1884, p. 478, attention is drawn to a preparation now prepared by the 'Carrick's Russian Condensed Mare's Milk Company.' The similarity of human milk to that of the mare is well known, and a careful trial of this preparation is advised, as it will most likely prove useful in many cases of delicate infantile digestion.

2553. *Blake on the Action of the Salts of Lime, Strontium, and Baryta on the Heart.*—Dr. James Blake, in the *Practitioner*, March 1884, p. 187, writes that Dr. Ringer, in August 1883, published in the same journal some investigations showing the similarity between lime, strontium, and barium in their chemical properties, as well as in their physiological, and therefore in their therapeutic, action. So far as the main object of these investigations is concerned, Dr. Blake refers to a paper published by him in the *Proceedings of the Royal Society*, 1841. Within the last few months the results of Dr. Blake's experiments have been published again in a paper read before the Académie des Sciences at Paris. As the abstract of this paper appeared in the *Comptes Rendus*, and was translated in the *Journal of the Chemical Society*, it is suggested that Dr. Ringer ought to have seen it. In 1839, Dr. Blake published the fact that the different salts of the same base exert the same physiological effect. This fact has been rediscovered, and published in recent numbers of the *Journal of Physiology*. [The able paper of Dr. Ringer in the *British Medical Journal*, August 1883, p. 265, bearing upon this subject, must be studied with Dr. Blake's paper.—*Rep.*]

2554. *Cider as a Preventive of Stone.*—In the *Brit. Med. Jour.*, February 1884, p. 281, it is noticed that in the statistics of the Caen Hospital only four cases of stone were admitted during fifty-nine years. In one, the nucleus was a foreign body; in two, the patients drank wine, *not cider*, which is the ordinary beverage in Normandy. Inquiries showed that stone in the bladder is rare in countries where cider is the chief drink. M. Denis-Dumont has found the diuretic properties of cider most useful in cases of gravel, obesity, and some forms of gastritis. RICHARD NEALE, M.D.

2555. *Campardon on the Treatment of Diabetes Mellitus by Air-Douches.*—Some rather striking results of this plan of treatment are reported in the *Gaz. Hebdom. de Méd. et de Chir.*, No. 13, 1884. The apparatus used was that of Dr. Dupont, which produces a considerable compression and refrigeration of the skin, followed by redness and perspiration. The current of air was directed to the chest or back for five minutes, and the sittings were repeated eight times or more. In all cases the patients said they felt better and stronger after the douche, and the quantity of urine and of sugar was diminished.

2556. *Hayem on Intraperitoneal Transfusion.*—By means of injections of dog's blood into the peritoneal cavity of kids, M. Hayem has proved that the corpuscles are readily absorbed by the serous membrane. In a paper read at the Académie de Médecine he states (*Gaz. Hebdom. de Méd. et de Chir.*, No. 13, 1884) that, some hours after the operation, numerous red corpuscles of the dog can be found in the blood and thoracic duct of the kid; they are easily distinguished from the red corpuscles of the latter by their much larger size. Further experiments will show if the blood be absorbed by the lymphatics only or also by the blood-vessels. In any case, an intraperitoneal injection of blood

seems to have the same effect as an injection made very slowly into the veins.

2557. *Delthill on the Specific Treatment of Diphtheria.*—The author recommends (*Union Médicale*, No. 45, 1884) burning every two or three hours in the room of the patient a mixture of 200 grammes of coal-tar with 80 grammes of oil of turpentine. He states that the effect of this treatment is to dissolve the false membrane, and to arrest the disease when it is not too far advanced. These fumigations are said to be very useful in cases where tracheotomy has become necessary, and they are also supposed by the author to prevent the spread of the disease and to purify the house.

2558. *Teissier on the Treatment of Diabetes by Bromide of Potassium.*—Since Felizet recommended this drug in 1882, it has been used in many cases, and often with success; but some physicians have expressed the fear that it might exercise a depressing influence upon the patients or cause skin-eruptions, boils, and carbuncles. The author (*Lyon Médical*, Feb. 1884) shows that these fears are groundless, and that daily doses of three or four grammes can be given with very good results, especially in the glycosuria of people exhausted by pain or anxiety.

2559. *Bouchut on Injection of Carbolic Acid in Diphtheria.*—The treatment of diphtheria by injections of a 5 per cent. solution of carbolic acid into the tonsils was recommended some years ago by Dr. Götz, of Leutershausen; and, according to Dr. Bouchut (*Paris Médical*, No. 12, 1884), the results are satisfactory. He makes three injections into each tonsil. Sometimes the diphtheritic membranes disappear after the first injection; in other cases they persist for a few days, whilst in some patients they spread in spite of every treatment.

J. S. KAESER, M.D.

2560. *Georgizon on Crude Petroleum as a Disinfectant and Preserving Agent.*—In the *Arkhiv Veterinarnykh Nauk*, Dec. 1883, p. 67, M. M. P. Georgizon, a veterinary surgeon of Baku ('petroleum town') gives an interesting article on the various properties and uses of crude petroleum. The author points out a certain similarity existing between the action of this substance and that of turpentine. Taken internally, it augments the secretion of urine and mucus. Inhalation of its vapour in the open air increases the frequency of pulse, ease of respiration, and the secretory action of the respiratory mucous membrane. Prolonged inhalation in a confined space causes headache, sleeplessness, and giddiness. Inunction of petroleum in animals rapidly destroys fleas, lice, and acari of scabies. Like M. Popoff (*Arkhiv Veterinarnykh Nauk*, Sept. 1881) and Dr. Bronnikoff (*Ibid.*, Sept. 1880), the author speaks favourably of the drug as an antiseptic dressing of wounds in animals. A series of experiments showed that crude petroleum seemed to annihilate the infectious power of rinderpest-virus. [These experiments consisted in the immersion in petroleum of blood and mucus from the diseased animals, and in subsequent inoculation to the healthy; the results were negative.] Another series of comparative experiments on the antifermentative and antiputrefactive action of various substances (a solution of 2 grains of permanganate of potash in 3 ounces of water, a concentrated solution of phenol in water and glycerine, liquor of perchloride of iron, turpentine, and crude petroleum) showed that petroleum acted far more weakly than phenol or the solution of perchloride of iron, but more strongly than the solution of permanganate of potash. A piece of meat kept in petroleum at the temperature from 25° to 38° C. (from 77° to 100° F.) remained sweet for five days. M. Georgizon recommends petroleum as a cheap means for disinfection of animals, stables, &c., in cases of rinderpest and anthrax, and as a preserving fluid for anatomical preparations, dead bodies, &c.

2561. *Popoff on the Action of Sulphurous Acid on the Tubercle-Bacillus.*—In the *Meditz. Pribavl. k' Morsk. Sborn.*, Feb. 1884, p. 48, Dr. J. P. Popoff, of Nikolaevsky Marine Hospital, describes his observations on the tubercle-bacillus, for the detection of which he used Zenkevitch's method (see the LONDON MEDICAL RECORD, May 1883, p. 201). The author specially draws attention to the fact of the bacillus being invariably present in the blood of consumptive patients, and goes even so far as to assert that, in dubious cases, examination of the blood may lead to a decisive diagnostic conclusion. He says further that the rods, after they have been for an hour exposed to the action of sulphurous vapour, strikingly change their form (they shrink, become shorter or thicker, or curved). Having obtained this 'proof' of the bacilli being influenced by sulphurous acid, the author resolved to try sulphur-fumigations in several cases of phthisis, and found that already after the first week of the treatment the rods grew thinner and paler, and in three or four weeks 'almost entirely disappeared' from the sputa. In one of the cases the disappearance of the rods after one month's treatment coincided with a striking improvement in the physical signs and with an increase in the patient's weight (three pounds). [The treatment of phthisis by inhalations of sulphurous acid was recently tried with a certain amount of success by Drs. Rombro and Ananiin; see the LONDON MEDICAL RECORD, Aug. 1883, p. 323, and December, p. 506.—*Rep.*]

2562. *Sudeikin on the Therapeutic Value of Tartrate of Chinoline.*—Continuing his investigations into the action of chinoline (see the LONDON MEDICAL RECORD, Dec. 1883, p. 505), Dr. N. Sudeikin, of Professor Lashkevitch's clinic, in Charkov, details (*Russkaia Meditzina*, No. 2, 1884) sixteen cases treated by this drug, the consideration of which leads him to the following conclusions. 1. Chinoline acts beneficially only in intermittent fever. 2. The best results are obtained in cases of recent origin. 3. Chinoline must be administered before the expected paroxysms, and in larger doses than quinine. 4. It has no influence on the enlarged spleen. 5. Except vomiting, there are observed no toxic symptoms, even when chinoline is used in large doses in children. The author gave from ten to twenty-five grains of chinoline daily to an adult, and upwards of fifteen grains daily to a child three years of age. As he believes, the only drawback of the drug is that it easily induces vomiting.

2563. *Guldas on Tartrate of Chinoline.*—Having undertaken a series of experiments in Professor P. A. Gordeeff's laboratory, at Charkov, M. J. Guldas (*Veterinarnyi Vestnik*, Fasc. 2, 1883) came to the conclusion that the antifermentative and antiseptic properties of tartrate of chinoline are far inferior to those of carbolic acid. The development of higher forms of bacterial life in infusions of meat and hay cannot be prevented for any long periods, even when a maximally concentrated solution (5 per cent.) of chinoline is used.

2564. *Saltykoff on Alum in Intermittent Fever.*—Like Drs. Banergee and Shidlovsky, Dr. N. N. Saltykoff, of Temir-Khan-Shura, Dagestan (*Proceedings of the Caucasian Medical Society*, Jan. 16, 1884), treated intermittent fever by the internal administration of alum. He gave two eight-grain doses daily, one three hours, and another one hour, before the time of an expected paroxysm. The number of the patients thus treated was fifty. Seven of them suffered from quartan fever, twenty-three from quotidian, and twenty from tertian. The paroxysms disappeared only in thirteen patients (in five with the quotidian variety, and in eight with tertian). In five of these patients the attacks ceased to occur after a single dose; in the remaining eight after two and a half doses (in average). All the cured cases were of a very mild type. No action on the spleen was observed. The alum treatment of malarial fever proved equally unsatisfactory in other Caucasian towns, to wit, in Batum and Sukhum (Dr. A. F. Gavrilko's statement), Tiflis (Dr. J. J. Zubrilin), and Erivan (Dr. A. A. Kalantaroff).

2565. *Savvinsky on Alum in Intermittent Fever.*—In the *Meditzinsk. Obozren.*, Fasc. 3, 1884, p. 289, Dr. Al. Savvinsky, of Podolsk, Moscow Government, reports twelve cases of intermittent fever, all of which were rapidly cured by alum, in eight-grain doses (in half a tumbler of water) three times daily. To prevent any return of paroxysms, the author advises the administration of a few more doses of alum after the fever has been cut short. All his cases were of a mild type and recent standing (not more than four days). V. IDELSON, M.D.

2566. *Steffen on the Action of Kairin.*—Dr. Steffen reports (*Jahrbuch für Kinderheilkunde*, Band xxi., Heft 1) six cases, in which he gave the hydrochlorate of kairin with, as regards the day time, almost hourly records of temperature. Three of the patients were children with typhoid fever. The temperature in these was rarely over 104°, but the drug seemed to exercise a marked and rapid influence in reducing it. Thus, one hour after the administration of 3 grains, the thermometer sank from 104°·2 to 101°·8; an hour later it was down to 98°·8. It was not long, however, before it rose again, to be once more reduced on the repetition of the dose. The next two patients were cases of croupous pneumonia. They were aged respectively 7 and 11, and the usual dose was 7 grains; but, in both of them, the antipyretic action of the drug, though still evident, was much less marked than in the preceding; indeed, its first effect was sometimes a temporary rise of temperature. The remaining patient, a girl aged 7, was admitted for scarlatina and diphtheria, but died about twenty-four hours afterwards. Still, each of the four doses of 7 grains was followed by a remission of temperature. In the typhoid cases, more particularly, the pulse and respiration were reduced quite as much as the temperature. Symptoms of collapse showed themselves occasionally, but never to a dangerous extent. The urine became dark-coloured or greenish some hours after the drug was given. Rigors were never observed to accompany the reactionary rise of temperature. RALPH W. LEFTWICH, M.D.

2567. *Schwabach on Disturbances of Hearing after the Use of Quinine and Salicylic Acid.*—Dr. Schwabach, of Berlin, writes to the *Deutsche Med. Wochensch.* of March 13, on a permanent disturbance of the sense of hearing after the employment of quinine and salicylic acid. He has had cases under his care in which even moderate doses of the drugs—eighteen grains of quinine and fifteen of salicylic acid (in the one case given at once, in the other in repeated doses)—have caused permanent congestion of the middle and internal ear, as evidenced both by examination and by the persistence of deafness and singing in the ears. Dr. Schwabach effected a great improvement in his cases by the use of the air-douche and the injection of a few drops of a 3 per cent. solution of chloral-hydrate. Schilling recommends the addition of an equal quantity of ergot to the use of quinine, and Dr. Schwabach suggests that the preparation mentioned by Drs. Finkler and Prior in the *Deutsche Med. Wochensch.*, No. 6, 1884, 'chininum amorphum boricum,' may be of service in preventing the permanent after-effects, as it is said to cause less singing in the ears than the ordinary preparations. Every case in which the singing does not disappear within two or three days should be examined, to see if congestion of the tympanic membrane be present.

2568. *Finkler and Prior on a New Preparation of Quinine.*—Drs. Finkler and Prior write from the medical clinic at Bonn, to the *Deutsche Med. Wochensch.* of Feb. 7, in favour of a new preparation of quinine, called 'chininum amorphum boricum.' It is an amber-coloured, crystalline powder, with a faint (not disagreeable) odour, and a bitter taste, not so intense as that of muriate of quinine, and is soluble in an equal quantity of water. The authors have found that it is much better borne than other preparations of quinine, even patients with irritable stomachs being able to take it without vomiting. A larger quantity of water, a mouthful of wine, or a spoonful of brandy, taken immediately after the drug, helps to prevent nausea where there is any tendency to it. The action of the new remedy is equally satisfactory, it having been tried in typhoid septic fever, erysipelas, pneumonia, phthisis, and in one case of periodical neuralgia. In all those cases it showed itself quite equal to the sulphate or muriate, and in the case of neuralgia its action was specially remarkable, the pain ceasing entirely after six days of the treatment, with no relapse at the end of five months. This preparation seems to cause much less singing in the ears and other disagreeable symptoms than a large dose of quinine, and the authors conclude by expressing a hope that further investigations may be made.

2569. *Schmidt on the Treatment of Goître by Cold and Iodide of Potassium.*—Dr. Moritz Schmidt, of Frankfort-on-the-Main, communicates to the *Deutsche Med. Wochensch.* of Feb. 21 six cases of goître, which he has cured or greatly relieved by means of cold and iodide of potassium. Having had one case die under treatment after injection of iodine, he was unwilling to resort to it again; and he has found that cold water, conducted round the neck by means of Leiter's tube, and the internal use of the iodide, have had good results. He dissolves the iodide in an equal quantity of water, and administers from 15 to 30 drops daily, according to the severity of the case. Ordinary cold water seems to have the same effect as ice; and although the tube is worn continuously in the beginning when the case is severe, it is afterwards sufficient to employ it for three hours at a time, morning and evening.

2570. *Kassowitz on the Treatment of Rickets by Phosphorus.*—In the *Wien. Med. Blätter* of Feb. 7 Dr. Kassowitz, of Vienna, gives a summary of his investigations into the treatment of rachitis by phos-

phorus, which he has been publishing in that journal during the months of December and January. He finds that minute doses of phosphorus, about 1 milligramme ($\frac{1}{70}$ grain) daily, have a very beneficial influence on all forms of rickets, especially on the form characterised by softness of the cranial bones and abnormal width of the fontanelles and sutures. He found, in his preliminary investigations, that rachitis was always associated with increased vascularity of the osseous tissues; he also found that phosphorus, administered to young growing animals, had the effect of checking the circulation through the bones, and, by combining the results of the two sets of experiments, he obtained his present treatment for rickets. This has been so successful in his clinic that its fame has spread in and around the town, until the number of rachitic children brought to him in 1883 was more than four times what it was in 1877. The treatment must not be given up at once when some improvement takes place in the symptoms, but it must continue until the children can walk or stand with a facility proportionate to their age. The phosphorus may be given in almond, cod-liver, or any other oil.

2571. *Heubner on the Hydrotherapic Treatment of Typhoid Fever.*—Professor Heubner, of Leipzig, writes to the *Wien. Med. Blätter* of March 6 and 13 on the hydrotherapy of typhoid fever. He uses baths, not only, or even chiefly, on account of the high temperature, but also for their reflex action on the vessels of the skin, for which purpose they must sometimes be lukewarm, or even warm. For young and robust patients he often orders cold baths, often lasting from fifteen to twenty minutes; but when the temperature is low, or the patient either a child or an aged individual, a warmer bath is necessary, followed, however, in all cases by cold affusion over the head and neck. He never disturbs his patients when asleep in order to give a bath. He concludes his article by recommending small doses of calomel to be given early in the illness, as it will act antiseptically on the materies morbi, in the form of corrosive sublimate, into which it is changed as it passes through the organism.

2572. *Betz on Solution of Chloride of Sodium in Hæmorrhage.*—Dr. Betz suggests in his *Memorabilien* (*Wien. Med. Blätter*, March 6) the administration of a solution of chloride of sodium by the mouth in cases of hæmorrhage, where transfusion cannot be resorted to. In one case of hæmorrhage after abortion he administered half a litre of the solution, containing a teaspoonful of salt, at the rate of three tablespoonfuls every five minutes. A second half litre was afterwards given at longer intervals, and whilst it was being taken the lips and cheeks began to be coloured, and the pulse grew stronger. The patient recovered. ALICE KER, M.D.

2573. *Graziadei on Kairin.*—The author, in an important article in the *Riv. di Chim., Med., e Farm.*, No. 3, 1884, describes fully the researches made in the Medical Clinic of Turin on this new antipyretic. The results of his studies may be thus summed up. Kairin has a strong antipyretic action, of short duration; its action may be rendered more lasting by keeping the patient under the influence of the drug, administering doses differing in each individual, and requiring to be ascertained in each case. Kairin modifies so slightly the force of the heart, that in moderate doses its action on this organ is insignificant. Kairin does not produce collapse if the quantity given be not excessive, and if a proper interval be allowed to elapse between the doses. It does not shorten the morbid process, but influences it favourably and diminishes the fever. Its action is similar to that of thymol and phenol, and more rapid but less lasting than that of most other antipyretics. Sometimes it is only efficacious in large doses; the use of the bath is then useful at the same time. Except for the rapidity of its effects, which are, however, fugitive, it is not to be preferred to salicylate of soda, creasotinate of soda, thymol, and other antipyretics; still less can it be compared with the bath.

2574. *Charpentier on Sulphate of Copper in Obstetrics.*—In a paper read before the Academy of Medicine of Paris, the author concludes that sulphate of copper in solution of 1 per cent. is an antiseptic of the first order, which may be most useful in obstetric practice. Injected into the vagina or uterus it is absolutely harmless, of small cost, easy use, and is moreover an energetic and prompt disinfectant. Its properties as an astringent and coagulant justify its substitution for perchloride of iron as a hæmostatic, compared with which it has the advantage of not giving a bad aspect to the surface of wounds. The strength of the solution should be 1 per cent., and this should be used at a temperature of 36° to 35° C. This injection may be used several times a day, for eight or ten days. During its use the author has seen a case of voluminous thrombus of the vulva recover rapidly and perfectly, without a trace of suppuration.

2575. *Arango on Nux Vomica as a Galactagogue.*—Dr. Posada Arango speaks very highly of the good effect of nux vomica as a stimulant to the secretion of milk. He gives ten drops of the tincture three times a day, and explains its galactagogue properties by its action on the mammary gland, exciting it to secretion, and by its stimulating action on the stomach facilitating digestion. He recommends strychnia in recent cases of complete suppression of the secretion.

G. D'ARCY ADAMS, M.D.

2576. *Douvreleur on the Physiological Action of Sulphate of Cinchonidine.*—In a thesis on this subject, of which a summary is given in the *Journal de Thérapeutique*, M. Douvreleur gives the results of experiments made in M. Germain Sée's laboratory, and under the direction of M. Bochefontaine. The discovery of cinchonidine is due to M. Pasteur, who showed thirty years ago that the quinidine of Winkler consisted of two substances, one hydrated, for which he retained the name quinidine; the other, anhydrous, which is cinchonidine. Cinchonidine and quinine differ widely in their physical characteristics. Cinchonidine is sparingly soluble in water, but is soluble in alcohol poured on it quickly; while quinine is scarcely soluble in alcohol. Cinchonidine, when treated with chlorinated water and ammonia, does not give a green colour like quinine, nor is it soluble in ether and ammonia. M. Douvreleur has made a series of researches on frogs, pigeons, guinea-pigs, rabbits, and dogs. Concentrated solution of cinchonidine is not so powerful a local irritant as sulphate of quinine. Its toxic effect is greater on frogs, guinea-pigs, and dogs than on rabbits and pigeons. Sulphate of cinchonidine and sulphate of quinine have the same toxic effect; two centigrammes kill a frog in twenty-four or thirty-six hours; two grammes kill a rabbit in six hours, and a dog in two hours. In dogs, cinchonidine provokes vomiting and copious salivation.

In rabbits and guinea-pigs it produces hiccough and retching, but not vomiting. Respiration is at first quickened, and the animals pant; afterwards the respiration is considerably retarded, and in some cases, when the dose is sufficient, it is completely arrested. If sulphate of cinchonidine be placed in direct contact with a frog's heart, the beats are gradually rendered slow; when it is injected under the skin the same effect is produced, but in half the cases it is preceded by acceleration of the cardiac beats. In dogs, when the drug is swallowed internally, the heart-beats are first accelerated and arterial tension is slightly increased. Both, however, return to the normal condition, and are then reduced, especially if the dose be increased without being poisonous. The pulse, while rendered slower, also becomes stronger and fuller. The modification of the pulse and blood-pressure, under the influence of cinchonidine, are identical with those recently observed by M. Bochefontaine under the influence of quinine. The pulse is always regular both with quinine and with cinchonidine. M. Douvreleur observed no instance of the intermittence nor irregularity attributed by M. Laborde to the influence of quinine. Sulphate of cinchonidine increases the secretion of saliva. It was detected in the saliva and in the mucus of the stomach and of the bronchial tubes vomited by the dogs. It is, however, chiefly eliminated by the kidneys, and is easily detected in the urine. The antithermic action of cinchonidine is analogous to that of quinine. In cold-blooded animals its influence on the nervous system is to produce numbness and paralysis, never convulsions. In warm-blooded animals it produces involuntary movements of the head, great loss of power of the hind legs, then repeated vomiting and salivation. Convulsions or convulsive tremblings sometimes ensue. They almost always occur in the guinea-pig, but large doses are necessary to produce them in rabbits, pigeons, and dogs. With regard to convulsions, the action of sulphate of cinchonidine resembles that of quinine more than that of cinchonidine. M. Douvreleur has observed an extreme diminution of sensibility in some fatal cases amounting to suppression. The analogy which exists between the physiological effects of cinchonidine and those of quinine justify, in M. Douvreleur's opinion, trials of its therapeutic efficacy.

W. Vignal.

2577. *Borcheim on Pulsatilla in Acute Epididymitis.*—Dr. L. E. Borcheim, of Atlanta, Georgia, in the *Jour. of Cut. and Vener. Diseases* for April, says: 'Numerous disappointments in the treatment of this disagreeable and painful affection by the usual methods, and the perusal of a few brief articles published in the journals at various times by Piffard, Sturgis, and Fox, of New York, have led me to employ experimentally the tincture of pulsatilla, and I am pleased to state, to my complete satisfaction, as in using this drug I found that not only was the relief its administration afforded more prompt than by the former methods employed by me (cathartics, poultices, rest, &c.), but that it completely did away with one of the most objectionable features of that treatment, namely, rest in bed. The cases on which I base these few remarks are twenty-four in number, all of which have been treated within the past eighteen months, and they were all in the acute stage of the disease; hence I think I can safely draw correct conclusions. During my hospital service in New York, I had ample opportunities for practically testing the value of the treatment of acute epididymitis as advised by Prof. Bumstead (Bumstead and Taylor, *Venereal Diseases*, 4th edit., p. 145 *et seq.*), and arrived at the conclusion that the only source of benefit was the fact that rest in recumbent posture was strictly enjoined. Now, the class of men who are liable to this disease are principally young men, who prefer to suffer almost anything rather than have their troubles known, and it is with the greatest difficulty that they can be induced to go to bed. Now, here I think we have a remedy which does not require so exacting a discipline, as I never found in all my cases any necessity for complete rest in bed, the only requirement being the wearing of a suspensory bandage, and taking of the medicine. The relief from pain usually takes place within three days. The preparation employed by me is the tincture of pulsatilla manufactured by Boericke and Tafel, of New York, the dose being two drops every two hours. No benefit is derived from the use of larger doses at longer intervals.'

2578. *McChesney on Corrosive Sublimate in Gonorrhœa.*—Dr. Joseph McChesney, of Deming, contributes to the *Therapeutic Gazette*, for December, a report of a series of seven cases of gonorrhœa in which he employed by way of treatment, only a solution of corrosive sublimate, one grain to six ounces of water. The results are already very surprising. In several of these cases this injection was resorted to after a long and unsuccessful course with the ordinary remedies in such cases, and the result was uniform success. He resorts to these injections, which he gives once every four hours, after the subsidence of the acute stage. He is very confident that, properly applied, this solution will effect a cure of the gonorrhœa within from eight to ten days after it has been resorted to.

2579. *Hicks on the Cuca Leaf and its Extract.*—Dr. H. D. Hicks believes that the properties of this drug deserve to be better known to the profession. In a paper (*New York Med. Jour.*, Feb. 23), containing clinical records of three cases, its remarkable effects in relieving the sense of fatigue after extreme muscular exertion, and in sustaining the physical powers under unusual demands, and in weak heart, are well demonstrated. Dr. Hicks uses the remedy in his practice in order to prevent and relieve fatigue; to relieve pains in the back accompanied by the discharge of dark-coloured urine; in dyspnœa due to weakness of muscles of respiration; for palpitation of heart due to dilatation or weakness of the heart-muscle without valvular lesions; for mental exhaustion and low spirits; for depression of nervous system following sexual excesses, sick-headache, &c. Finally, he alleges that it destroys the craving for alcohol, and that its habitual use as a part of the daily diet conduces to mental clearness and activity, freedom from fatigue, and sound sleep. These good effects were obtained from doses of half a drachm of the fluid extract several times daily.

2580. *Gamgee on the Use of Collodion in Acute Orchitis and other Conditions.*—Collodion is not adequately appreciated and utilised, according to Mr. Gamgee (*Birmingham Med. Review*, Jan. 1884). Its ready evaporation and contraction give it the dual antiphlogistic power of refrigeration and compression. In acute orchitis, for example, Mr. Gamgee knows of no plan of treatment so simple, rapid, and satisfactory as coating the cord and scrotum with layers of collodion by the aid of a camel's hair brush. The sensation is momentarily

sharp, the shrinkage is rapid, and so is the subsidence of the inflammatory process. To swollen parts which cannot well be bandaged, collodion is especially applicable for the compression attending its contraction. When the nasal bones are fractured, a very effective mould for keeping them immovable, after adjusting them with the fingers, may be thus made : place over the nose a thin layer of absorbent cotton soaked in collodion ; as it dries, another layer of cotton and more collodion, taking care that the application extends sufficiently on each side to give buttress-like support. The patient compares the feeling to the application of a firm bandage on the nose, and the bones consolidate effectively under the shield, which may be renewed as it cracks and peals off.

2581. *O'Brien on the Prolonged Use of Jaborandi in Bright's Disease.*—Dr. F. A. O'Brien, of Atlanta, Georgia, sends to the *New York Med. Record* a communication, in which he calls attention to the beneficial action of jaborandi, given in small or moderate doses, for a long time, in the various forms of albuminuria classed under the head of Bright's disease. He has found that the drug is better borne when combined with nux vomica than if administered alone. In his opinion the action of jaborandi is not to be explained solely from its sialogogue and diaphoretic effects. He believes that it has influence on the kidneys, permitting the tubules to relieve themselves of the inflammatory products that block up their lumina.

2582. *Parish and Squibb on the Use of Hydrobromic Acid.*—Dr. Joseph Parish, of Burlington, New Jersey, writes, referring to an article by Dr. C. L. Dana (*Journal of Nervous and Mental Diseases*), on hydrobromic acid, that he has recently used it in two cases. 'In one, it relieves the insomnia in fl ʒ j. doses, taken p.m., say three doses a few hours before retiring. The other is a neurasthenic case, in which there is enlargement and hardening of the sciatic nerve and general neuralgia. In this case I have given the bromides in several forms with but little impression, except bromism. Hoping to avoid the bromism, I resorted to 10 per cent. acid, with the effect of bringing out the bromism as distinctly as when she took either of the salts. In direct opposition to this case, I have a lady of 40, an epileptic, who has taken bromide of potassium, in doses of from half a drachm to a drachm and a half, three times daily, for the last fourteen years, without the slightest sign of bromism.' Dr. Squibb writes of hydrobromic acid in *Ephemeris* : 'Its most common, and probably most effective use, is as an addition, either constantly or intermittently, to solutions of the bromides when these have to be taken for a long time and in full doses. In this way full bromide doses may be easily maintained, while the effect of the bases is diminished. Full doses of the acid are difficult to administer on account of its intense acidity. It is best given with sugar or with syrup, or with the syrup of acacia, and with lemon syrup it is somewhat like lemonade. Large dilution is always advisable. The dose of the officinal acid is 2 to 4 fluidrachms, which is equal in bromide to 17 or 34 grains of the potassium salt. An equivalent dose of the 34 per cent. acid is about 27 to 54 minims. This acid is very useful in making extemporaneous solutions of many bromides. For example, the very effective bromide of lithium may be very easily made extemporaneously by prescription, by simply saturating, or nearly saturating, the acid with lithium carbonate.'

DERMATOLOGY.

RECENT PAPERS.

2583. BALZER.—Contribution to the Study of Trichophytic Erythema (Giant Trichophyton). (*Archiv. de Phys. Norm. et Path.*, 1883, and *Annali Univ. di Med.*, Dec. 1883.)

2584. MAJOCCHI.—On a New Trichophysis, 'Trichophytic Granuloma.' (*Bull. della R. Accad. Med. di Roma*, Oct. 1883 ; *Annali Univ. di Med.*, Dec. 1883.)

2585. EKLUND, F.—Contributions to the Study of Lepocolla Repens, the Fungus Element of Psoriasis. (*Giorn. Italiano delle Malattie Veneree e della Pelle.* April 1882, and *Annali Univ. di Medicina*, Dec. 1883.)

2586. PELLIZZARI, C.—Rhinoscleroma. (*Archivio della Scuola di Anatomia Patologica*, Vol. ii., 1883.)

2587. CAMPANA, R.—Inoculations with Leprous Nodules. (*Archiv. per le Scienze Mediche*, Vol. vii., No. 3.)

2588. CAMPANA, R.—Lepra of the Tongue. (*Giorn. Ital. della Malattie Veneree e della Pelle*, Fasc. 5, An. viii., and *Annali Univ. di Med.*, Dec. 1883.)

2589. NICOLICH, G. D.—On Scleroderma in Adults. *Lo Sperimentale*, October 1883.)

2590. ALPAGO-NOVELLO. Scleroderma. (*Gazz. Med. Ital. Prov. Venete*, March 22, 1884.)

2591. SHIRIAFF.—On the Treatment of Psoriasis by Hypodermic Injections of Pilocarpine. (*Meditz. Obozren.*, Fasc. 2, 1884, p. 208.)

2592. LE PAGE.—Neuropathic Plica. (*Brit. Med. Jour.*, Jan. 1884, p. 160.)

2593. FAULKNER.—Electrolysis in the Treatment of Dracunculus. (*Brit. Med. Jour.*, Dec. 1883, p. 1280.)

2594. THIN.—Cases of Thickened Epidermis treated by Salicylic Plaster. (*Ibid.*, Dec. 1883, p. 1071.)

2595. LADREIT DE LACHARRIÈRE.—The Treatment of Herpes Tonsurans by Croton-oil. (*L'Union Méd.*, Jan. 5, 1884.)

2596. CRAMOISY.—The Treatment of Parasitic Skin-diseases.

2597. Treatment of Warts. (*Wiener Med. Blätter*, Nov. 8, 1883.)

ART. 2583. *Balzer on Trichophytic Erythema (Giant Trichophyton).*—The author (*Archiv. de Phys. Norm. et Path.*, 1883, and *Annali Univ. di Med.*, Dec. 1883) describes five cases of that form of herpetic eruption, produced by a trichophyte on the hairless skin, named by Duhring *crural trichophytic erythema.* The rash appeared in all in the perineo-scrotal and crural regions, in the axilla, and on the dorsum of the foot. Microscopic examination of the scales revealed a singular form of trichophyte, characterised by very long mycelial tubes, branching at long intervals, straight, or flexuous. These tubes are constituted by a homogeneous involucrum, of double outline, having more or less granular nuclei due to segmentation. These are the sporiferous tubes or receptacula. Other mycelial tubes have a varying number of terminal spores ; others terminate in a single sporigenous enlargement. In the midst of these mycelial tubes are found oblong, oval, or elliptical spores, and some in process of transformation into mycelial tubes. This form of giant trichophyte was always found with the same morphological character in all five cases of trichophytic erythema. The fungus is not found in the thickness of the skin ; it seems to have no tendency to invade the follicle and the skin ; while the trichophyte of herpes circinatus easily penetrates the substance of the skin, giving rise to sycosis. In trichophytic erythema the large size of the spores and mycelial filaments seems to

render penetration impossible. The question arises whether this is a special trichophyte with large spores, or whether the peculiarities of the fungus are due to the seat occupied by it. The author inclines to the first hypothesis. This form is never found in common herpes circinatus. Owing to the superficial site of the parasite the cure is easy. The author first applies compresses of camphorated alcohol on the erythematous patches, and, having produced by this means a considerable irritation, he has recourse to soaps and painting with tincture of iodine, repeated at intervals of two or three days.

2584. *Majocchi on a New Trichophysis, 'Trichophytic Granuloma.'*—The author (*Bull. della R. Accad. Med. di Roma*, Oct. 1883; *Annali Univ. di Med.*, Dec. 1883) describes a new form of trichophytic eruption clinically and pathologically distinct from other dermatoses produced by trichophyton. He says :—'There is a new form of trichophysis of the hairy skin, belonging to the class of compound forms, distinct clinically from sycosis and kerion. It is characterised by roundish, flattened, dermic swellings, painless except on pressure, covered by skin of normal colour, or slightly red, but not desquamating, surrounded by colourless areola, disposed with a certain symmetry, of the size of half a nut or bean, at first somewhat elastic, later soft and almost fluctuating, so as to simulate small subcutaneous abscesses, with which perhaps it has hitherto been confused.' Like other trichophytic forms, it has an herpetic stage—*i.e.* it is preceded always by herpes tonsurans, of which, like kerion, it represents the later stage. It is accompanied by herpetic patches, some of which present the form of pseudo-area. The pathogenesis of this trichophysia is due to a chronic folliculitis or perifolliculitis produced by the irritating action of the fungus which has penetrated into the connective tissue of the derma through the follicle. Histologically, it has all the characters of a subcutaneous granuloma, formed by a tissue of young granulation-cells, rich in vessels, in midst of which are found giant-cells, which give it the aspect of masses of tubercle. These tubercular masses under a low power (Ob. No. 4, Oc. No. 2) appear as round or oval patches, having for their centre either a piece of hair invaded by the fungus, or a focus of filament, either simple or branching, or bearing conidia. The giant-cells are disposed as a corona around the fragment of hair or mycotic focus ; this zone of giant-cells is surrounded in its turn by young granulation-cells, some of the larger of which have an epithelioid aspect. The facts met with in this trichophysis are a further proof of the penetration of the fungus into the derma, a fact denied by some dermatologists ; but, for this to occur, the fungus must pass by way of the follicle and annexed sebaceous gland, and must be in the stage of mycelial development. The clinical and histological characters of trichophytic granuloma distinguish it from the other compound forms of trichophysis, and particularly from kerion. In kerion the folliculitis, and circumfolliculitis run a much more acute course than in trichophytic granuloma ; in the first, the process has all the characters of a simple suppurative inflammation ; in the second, it is a specific inflammation tending to the formation of subcutaneous granulations. To the development of this form of trichophysis the lymphatic constitution may contribute as an occasional cause, under the influence of which is developed a product of slow plastic inflammation rather than a suppurative inflammation.

2585. *Eklund on Lepocolla Repens, the Fungus Element of Psoriasis.*—The fungus in psoriasis was discovered by Prof. E. Lang in the scales and fine epidermic pellicles. Kaposi and E. Schwimmer deny its existence, while to-day Behrend is inclined to admit its parasitic nature. The author (*Giorn. Italiano delle Malattie Veneree e della Pelle*, March and April 1883) finds that the walls of the capillaries form the point of departure of the dermatomycosis, just as Prof. Lang described. The fungus is characterised by smooth transparent threads, whose transverse section varies in different threads from 0·6 to 0·8 micromillimètre, and their length varies from 9 to 27 micromillimètres, or even more. These threads either extend separately to the four layers of the rete Malpighii, or lose themselves in a network with fine meshes along the walls of the capillaries, or divide in groups in the cells of the rete Malpighii. When the epidermic cells were acted on by potash, some remained firmly united to each other by a network of the filaments of the fungus ; others instead became separated, but were still covered with filaments of floating mycelium. The micrococci of these fungi (conidia) were found, either collected in large masses, easily recognisable, very close to the filaments of the fungus, or as exogenous spores, isolated, round, bright, hyaline, and well-marked outline, of an extraordinary size (1 micromillimètre). The filaments floating in the solution of potash were long, simple, or dichotomous, and some were furnished with a pear-shaped bud at one extremity. The filaments cannot be confounded with elastic connective tissue, or nerve-fibres, or lymphatic vessels, their structure being entirely different. From the culture of the epidermic scales in a nutritive vegetable solution, after 24 hours (at a temperature of 37° C.), threads of mycelium furnished with endogenous spores were seen. These spores, cultivated in 'bouillon' (Liebig), gave rise to extremely fine mycelial threads. The author then speaks of the pathological effects of the fungus on the skin, and shows how the irritation caused by it manifests itself in hyperæmia, exudation, and hyperplasia of epidermic cells, which do not exfoliate, but become heaped up in masses. The formation of the scales and their massing are due to the presence of the threads of mycelium, which set up an irritation, and at the same time bind the scales together. The extension of the disease is well explained by the diffusion of the mycelial threads, while the arrest of the patches is due to the exhaustion of the nutrient material. The fungus is found in animals, and especially in the horse ; for that reason, coachmen and grooms form a large proportion of the patients. The alleged heredity is better explained by the direct transplantation of the fungus from parents to children. The rarity of infection is due to the deep site in which the fungus is developed. Psoriasis vulgaris must be therefore considered as a chronic contagious disease of the skin with acute exacerbations, caused by the development of the fungus which Eklund calls *Lepocolla repens* (from λέπος, a scale, κόλλα, glue). As a last argument in support of the parasitic nature of psoriasis, the author refers to the great success attending treatment by local parasiticides, especially carbolic acid and glycerine.

2586. *Pellizzari on Rhinoscleroma.*—Hebra, who first described this disease in 1870 (*Archivio della Scuola di Anatomia Patologica*, Vol. ii., 1883), looked upon it as a neoplasm, or gliosarcoma. Most attention has been paid to this disease in

Vienna, and it is still a moot point whether it is to be considered a syphilide, or of a neoplastic, sarcomatous, or inflammatory nature. Pellizzari collects seventy cases. He considers that the disease is an inflammatory process due to a special cause, this cause being a micro-organism. His studies on this subject were far advanced when Professor Frisch, of Vienna, published a paper describing the micro-organisms of rhinoscleroma, which are identical with those seen by Pellizzari. These parasites appear in the form of short rods, and are within the cells, precisely as in lepra ; they are found in pairs, more often towards the periphery of the cell, and there disposed as rays. The cells preferred are those already in prey to hyaline degeneration ; between the cells they are less frequently met with. Frisch, having made his experiments on a bit of tissue taken from the living patient, has made some successful cultures, and has seen the multiplication of the bacilli without filaments or lasting spores ; with the bacilli he has made inoculations, but without result. Frisch considers this micro-organism to be the cause of the disease ; but Pellizzari still hesitates, though he admits the presence of the organisms.

2587. *Campana on Inoculations with Leprous Nodules.*—Campana proposed with these experiments to demonstrate the contagion of leprosy. He describes (*Archiv. per le Scienze Mediche*, Vol. vii., No. 3) the method employed in preparing the pieces and their inoculation in the cornea of animals, and gives the results of eight observations. The inoculation gave rise to limited inflammatory irritation, slight conjunctival catarrh, which lasted three or four days. In the parts surrounding the site of inoculation, he noticed slight inflammatory infiltration of the cornea, between the second and third days, swelling of the piece inoculated, and sometimes, between the fourth and seventh days, necrosis of the corneal tissue covering it. The formation of a superficial corneal ulcer followed, and new formation of a cone of vessels which terminated in it. The ulcer cicatrised in eight or ten days. If necrosis of the corneal layer anterior to the transplanted piece did not happen, the conjunctivitis ceased, the parenchymatous keratitis became less, and the transplanted bit diminished in size until it entirely disappeared after three weeks, leaving only a superficial inflammatory nebula which disappeared in fifteen to thirty days. After two or three months there was nothing to be observed in rabbits, neither in the eyes, skin, mucous membranes, or internal organs. In the corneæ of two rabbits in which the residuum of the transplanted piece or nebula existed, he found bacilli identical with those observed before inoculation sixty days before. In those killed later, all trace of the lesion having disappeared, he found nothing.

2588. *Campana on Lepra affecting the Tongue.*—The author reports a case in the *Giorn. Ital. della Malattie Veneree e della Pelle*, Fasc. 5, An. viii., of a youth aged 15, born of leprous parents, who for five years had suffered from maculo-nodular leprous eruptions of the skin of the face and limbs. The same eruption appeared on the tongue, and was there characterised by a group of little papilliform tumours, forming collectively an oval patch, of the size of a halfpenny, slightly raised, with a knotty and villous surface. The little tumours varied in size from a lentil to a hemp-seed ; some were conical, others rounded ; they were rose-coloured, and painless. A small bit was taken from the apex of one of them, and hardened in absolute alcohol : sections showed numerous characteristic bacilli lepræ collected in the leucocytoid and giant-cells. The author concludes that lepra may give rise to neoplasms, very similar to those of acuminate condylomata, in the same way as syphilis and tuberculosis.

2589. *Nicolich on Scleroderma in Adults.*—In an original and complete paper (*Lo Sperimentale*, October 1883) the author maintains that scleroderma is a special inflammation of the skin and subcutaneous connective tissue, sometimes also affecting the mucous tissue of the mouth and vagina, of slow course, beginning with hyperplasia and finishing with atrophy of the parts affected. This inflammatory process in all probability is secondary to a trophic nervous alteration. Scleroderma may invade the skin of the entire body, but more often affects the skin of the upper half only. Women suffer in a larger proportion than men. The disease is observed at all ages, but principally between twenty and thirty years. The most frequent occasional cause is the action of cold on the sweating or heated skin. Cure is possible only in the first stage of the disease, but in the second great improvement may be obtained. The best treatment is by massage and electricity.

2590. *Alpago-Novello on Scleroderma.*—G. Dalla Costa, a married woman, aged 43, with good family and personal history, never had any serious illness, and had never suffered from rheumatism. In 1875 she first noticed a certain hardness of the skin of the neck, which, gradually spreading, successively involved the skin of the neck, head, thorax, and arms. Dr. Alpago-Novello first saw her in 1880 ; her appearance then was very characteristic. Her face was pale, smooth as marble, and expressionless. The skin of the face and neck was firmly adherent to the subjacent tissues, seeming to form with them one single stratum, hard and cold to the touch. She could bend her head slightly forwards, and kept it always in that position as the most comfortable ; lateral movement was impossible. Her lips scarcely opened ; the eyelids could be opened and closed slowly. The eyes were normal. The hair was black and abundant, but the scalp was firmly adherent to the pericranium. The lobes of the ear were normal, and her hearing good. Both arms were affected, and their movement was very limited. The thorax was like a piece of white marble, back and front the same. The respiration was difficult and diaphragmatic. The glutei and thighs were also hardened, and the legs too, but in a less degree. She was able with difficulty to undress herself, but could not dress, nor stoop to pick anything from the ground. Her speech was much embarrassed and nasal; the tongue was much limited in movement, and could not be put out. She could only swallow liquids, and these often returned by the nose. The colour of the skin was livid white, but the lips, gums, and conjunctiva were well coloured. There was no perspiration except after taking acids, as vinegar or lemons, which gave rise always to free sweating. She complained of no pain, but had frequent shivers. Sensation was normal, both tactile, thermic, dolorific, and even electric. Cold seemed to be the cause of the disease ; she had never suffered from rheumatism. This etiology accords with the pathogenetic theory of the disease, which attributes it to an affection of the trophic nerves, irritated by the centripetal excitement of cold on the peripheral nerves. This trophic nervous disturbance leads to a permanent alteration of the capillary circulation of the derma (Gamberini), the proximate cause of the disease, or provokes (Nicolich)

a special chronic inflammation of the cutis and subcutaneous connective tissue, which, commencing with hyperplasia, ends in atrophy; but another unknown quantity must always be admitted in the etiology, and that is a predisposition. Symptoms worthy of note in this case are the frequent shivers, the absence of any pigmentary alteration of the cutis, which is often noticed by other observers, the integrity of sensations which Tanturri finds diminished or abolished, and the behaviour of the sudoriferous glands with acids. The patient died in May 1883.

G. D'Arcy Adams, M.D.

2591. *Shiriaff on the Treatment of Psoriasis by Hypodermic Injections of Pilocarpine.*—Dr. Shiriaff, of Moscow, reports (*Meditz. Obozren.*, 1884, Fasc. 2) two cases of psoriasis in girls, aged 14 and 15, in which complete recovery followed after seventy and seventy-four subcutaneous injections of a solution of pilocarpine. (℞ Muriate of pilocarpine, 1 grain; distilled water, 80 grains. M. From a fourth to one syringeful at a time.)

V. Idelson, M.D.

2592. *Le Page on Neuropathic Plica.*—Mr. J. F. Le Page, in the *Brit. Med. Jour.*, Jan. 1884, p. 160, records the case of a girl, aged 17, who had felt ill for six or seven days, complaining of more or less general numbness, together with the sensation of 'pins and needles' over the scalp. While combing her hair one evening, in the presence of her parents, she felt a tearing sensation on the right side of her head as though the hair were being pulled out, and on placing her hand to her head found that it was being drawn up. In one or two minutes, nearly the whole of the hair on the right side was drawn into a hard lump. Under the microscope, individual hairs appeared quite natural, but a very significant fact was brought to light; all the hairs which were contracted, closely curled, and intertwined were more or less flat, whilst those which were looped and festooned were round. The changes in the hair-bulbs producing the sensation of 'pins and needles,' together with the sensation described as that of tearing the hair out (due to the effect of spasms of the little muscles of the hair-follicles), proved that local hyperæsthesia was complete. It is suggested that the very high nervous tension found vent in the hair itself, and produced the uncommon condition to which the author has given the name of 'neuropathic plica.'

2593. *Faulkner on Electrolysis in the Treatment of Dracunculus.*—Mr. Faulkner, in the *Brit. Med. Jour.*, December 1883, p. 1,280, records a case of a Hindu, aged 28, who suffered from the effects of the presence of four guinea-worms in different parts of his body. The different positions of the several worms were as follows. In the upper third of the outer aspect of the right leg, a worm had protruded three inches; on the lower third of the outer side of the left thigh, another had also protruded to the extent of two inches; on the dorsum of the left foot there was a fistulous opening, indicating the site where a worm appeared, but had been broken off, the remaining portion of the worm being distinctly felt in the surrounding subcutaneous tissues; and on the back of the left hand another was plainly visible, but the site of its intended exit was not yet apparent. The author applied galvanism to the protruded worms with great success. The one in the upper part of the right leg was extracted after using galvanism for one hour; that in the left thigh, the day after the battery was used. Poultices were applied to the sole of the foot, together with galvanism; and, after one or two days, four inches of a worm were extracted. A small abscess formed over the worm in the hand, and in three days the entire nematoid, over twelve inches in length, was removed. This method is more rapid and more satisfactory than the usual routine treatment of applying poultices, and resorting to various means of preventing the worm from re-entering the body, by twisting the protruded part round a small quill or other convenient substance. In the *Brit. Med. Jour.*, January 1884, p. 138, Surgeon Reynolds writes to say that twenty-five years ago a brother officer informed him that he had used a galvanic battery in the extraction of guinea-worms, with great success.

2594. *Thin on Cases of Thickened Epidermis treated by Salicylic Plaster.*—Dr. Thin, in the *Brit. Med. Jour.*, Dec. 1883, p. 1071, reports four cases in which he used salicylic gutta-percha plaster, as recommended by Dr. Unna, with great success in cases of thickened epidermis on the soles of the feet or palms of the hands. The salicylic plaster must be kept constantly applied by means of bandages, and changed every third or fourth day. The hard layer of the epidermis will then come off in one layer, leaving a delicate rose-coloured epidermis behind it. After some months a second application may be necessary, but in many cases good results are produced, and last for some time after the first application. [In 1880 the value of salicylic acid in the cure of corns was noted, and also its value in 1879 in cases of lupus.—Vide *Medical Digest*, sect. 359 : 2.—*Rep.*]

Richard Neale, M.D.

2595. *Ladreit de Lacharrière on the Treatment of Herpes Tonsurans by Croton-oil.*—The author has published, in the *Union Méd.* (Jan. 5, 1884), the results of his treatment, which consists in applying to the diseased surface croton-oil made into sticks with wax and cocoa-butter. The sticks contain 50 per cent. of the oil. The hair must first be cut short or shaved, and a small surface only must be rubbed every day. A good deal of inflammation is set up, which must be allayed by poultices. Most of the patients were cured in one to four months.

2596. *Cramoisy on the Treatment of Parasitic Skin-diseases.*—In a paper read at the Paris Académie de Médecine, the author states that the best plan of treatment consists in using agents which prevent the multiplication of the parasites, and excite some desquamative inflammation, but without destroying the vitality of the tissues. M. H. Cramoisy does not approve of epilation, but recommends the use of one part of red oxide of mercury and two of salicylic acid, in 1,000 parts of pyroligneous acid. This treatment, however, has been proved useless in favus by Besnier, and has, moreover, the disadvantage of being very painful.

J. S. Kaeser, M.D.

2597. *Treatment of Warts.*—The *Wiener Med. Blätter* of Nov. 8 contains two different prescriptions for the treatment of warts. One is the application of a piece of lemon-peel which has been immersed for eight days in acetic acid, three or four times renewed. The slice of peel is left on the wart until it dries, which it does in about nine hours, and this is repeated four or five times. The wart is then so much loosened that it can be removed by strangulation. The second mode of treatment is to insert a pin beneath the wart, avoiding the healthy

skin, and then to heat the pin's head in a spirit-lamp. This causes the wart to become white and shrivelled at once, when it is easily removed without any bleeding. ALICE KER, M.D.

OBSTETRICS AND GYNÆCOLOGY

RECENT PAPERS.

2598. SOKOLOFF.—On Median Colporrhaphy in Cases of Complete Prolapsus of the Uterus. (*Vratch*, 1883, No. 3, p. 45.)

2599. BREUS.—Injury to the Uterus by Forceps. (*Wiener Med. Blätter*, March 27.)

2600. HICKS.—Fibroma in the Lower Part of the Uterus, Obstructing Labour. (*Lancet*, March, p. 497.)

2601. LEDIARD.—Alexander's and Adams's Operation on the Round Ligaments. (*Brit. Med. Jour.*, February, p. 254.)

ART. 2598. *Sokoloff on Median Colporrhaphy in Complete Prolapsus of the Uterus.*—At a meeting of the St. Petersburg Society of Russian Physicians, Dr. Sokoloff (*Vratch*, No. 3, 1883) communicated fourteen cases of complete prolapsus of the womb, cured by Neugebauer's operation. Twelve cases were operated upon in Professor K. F. Slaviansky's clinic, and two in private practice. The age of the patients varied from 25 to 56, the number of labours from 1 to 7. The operation consisted in excision of strips (beginning 2 centimètres from the insertion of the vagina to the uterine cervix, and having 5 centimètres in length and 2 or 2½ in breadth) from the mucous membrane both of the anterior and posterior vaginal walls, and in uniting the raw surfaces by means of eight or thirteen 8-shaped wire sutures. A vertical septum or bridge was thus formed, which duly supported the replaced womb. As a rule, the patients were allowed to get up by the tenth day. No chloroform was used during the operation. [In the *Gazeta Lekarska*, Nos. 1–4, 1884, Dr. Neugebauer states that from 1867 to 1883 he operated twenty-three times, with two deaths and two incomplete recoveries, the remaining nineteen cases being entirely successful. He gathers from literature seventy-one cases of his operation, sixty-three of which (88 per cent.) were successful.—*Rep.*]

V. IDELSON, M.D.

2599. *Breus on Injury to the Uterus by Forceps.*—Dr. Breus, assistant to Professor Braun, of Vienna, communicates to the *Wien. Med. Blätter* of March 27 a case of injury to the uterus, in consequence of faulty employment of the forceps. The patient was 40 years old, and had previously borne four children, the last of whom, being the only one strongly developed, was born dead. Labour in this case was said to have gone on for two days, and the liquor amnii to have escaped twenty-six hours before. Six hours before her admission into the hospital a medical man was called in, who ordered a powder for the pains and, when called again, applied forceps, with which he made fruitless attempts at extraction for two hours, the forceps slipping each time. He then sent the patient into the hospital, where a forehead presentation was diagnosed in a uniformly contracted rachitic pelvis, the cord being prolapsed and pulseless, and the child evidently dead. Marks of the forceps were plainly visible on the vaginal wall, and the examining finger was stained with blood, but the condition of the cervix could not be fully made out. Craniotomy was performed, and the child extracted as speedily as possible; and a rent was then found in the left wall of the cervix uteri towards the back, midway between the internal and external os. Three fingers could be passed through it, and it could then be felt that the peritoneum had also given way, and the fingers impinged on coils of intestines. The injury had evidently been caused by the rubbing of the uterine walls between the child's head and the sacral promontory, aided by the awkward manipulation of the forceps. The hæmorrhage from the cervical wall had passed between the folds of the parametrium, and had finally caused perforation of the peritoneum. The case did very well, the vagina being syringed with a 2 per cent. solution of carbolic acid, and the uterus fixed in position by a bandage, an ice-bladder being employed for four days. Some meteorismus gave considerable trouble during the first three days, but the temperature never rose above 38° C. (100°·4 F.); and, on the twentieth day the patient was able to rise for the first time. When she was discharged, on the twenty-third day, the involution of the uterus was good, although it was lightly fixed towards the left, and the defect in the parametrium had probably been filled up by cicatricial tissue. ALICE KER, M.D.

2600. *Hicks on Fibroma in the Lower Part of the Uterus, obstructing Labour.*—Dr. Braxton Hicks, in the *Lancet*, March 1884, p. 497, writes to support Mr. Farrant Fry in his attempt to assert that fibroid tumours situated in the lower part of the uterus should be enucleated before labour rather than after. Dr. Hicks described, in the twelfth volume of the *Transactions of the Obstetrical Society of London*, 1871, a case in which, repeated attempts to deliver having failed, owing to a tumour in the lower part of the uterus, he divided its capsule posteriorly and easily enucleated it; whereupon the head came down, and delivery was accomplished almost directly. The records of tumours in the lower part of the uterus, independent of pregnancy, lead to the conclusion that (whatever may be the objection to enucleation of a fibroma high up), in this position, removal before delivery is most likely to be the best method of treatment.

2601. *Lediard on Alexander's and Adams' Operation on the Round Ligaments.*—Dr. Lediard, in the *Brit. Med. Jour.*, Feb. 1884, p. 354, publishes short notes on four cases of procidentia uteri, in which he attempted to relieve the prolapsus by shortening the round ligament. In two cases the round ligament could not be found, and the wound was long in healing. The plan adopted was as follows. The ligament, when exposed, is pulled out and wound round a piece of stick, and left like a pedicle projecting through the wound, to fall off naturally. Nothing more than strict cleanliness and careful adjustment of the wound is necessary, together with sponge pressure and a gauze bandage. Careful stitching of the ligament, both deeply and superficially, is most important for the lasting success of the operation; and Dr. Alexander's recommendations as to the method of retaining the ligaments in their new position should be strictly adhered to (*Liverpool Med. Chirurg. Jour.*, Jan. 1883, p. 119). Dr. Campbell, in his paper in the same journal (July 4, 1883), where he reports four cases, mentions that the peritoneum does not follow the ligament 'under the necessary traction;' but in one of Dr. Lediard's operations this membrane certainly did follow the ligament, but was easily stripped back with the finger. RICHARD NEALE, M.D.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

RECENT PAPERS.

2602. Altara, G. M.—A Case of Poisoning by Carbolic Acid successfully Treated with Camphor. (*Gazz. Med. Ital. Lomb.*, April 5, 1884.)

2603. Racine. — Lead Mania. (*Deutsche Med. Wochensch.*, March 6.)

2604. Tchugin, V.—On Fish-Poisoning. (*Vratch*, 1883, No. 2, pp. 27-30.)

2605. Montalti.—Chemico-legal Researches on Acute Poisoning by Alcohol. (*Lo Sperimentale*, Dec. 1883.)

2606. Oliver.—Carbolic Poisoning in a Child: Recovery. (*Med. Times and Gazette*, March, p. 282.)

2607. Booth.—A Case of Chloral Poisoning treated by Belladonna. (*Lancet*, March, p. 468.)

Art. 2602. *Altara on Poisoning by Carbolic Acid successfully Treated with Camphor.*—This was a case of puerperal fever following abortion at the seventh month. Vaginal injections of carbolic solution (one per cent.) were ordered to be used three times a day, with phenate of quinine internally. On the second day of this treatment Dr. Altara was summoned in haste, and found the patient with very frequent scarcely perceptible pulse, temperature fallen to 35° C. (95° F.), a cold sweat, vertigo, difficulty of swallowing, pain in the loins, enuresis, and hæmoglobinuria. There was no doubt that the patient was suffering from symptoms of carbolic acid poisoning, with symptoms of collapse and irritation of the kidneys. A mixture of castor-oil and glycerine was at once given, and an injection of water and oil of almonds. Three hours afterwards the patient was worse. Dr. Altara, being struck by the analogy of the symptoms of irritation of the genito-urinary organs with those produced by cantharides, determined to give camphor, the good effect of which in the irritation produced by cantharides is well known. Half a gramme (7½ grains) of camphor in 200 grammes of orange syrup was prescribed, a tablespoonful to be given every hour. About half an hour after the first dose, the toxic symptoms began to diminish; after the third dose, the improvement was very evident; and after the fourth the pains were so much better, that the patient fell into a tranquil sleep, which lasted for some hours. In the morning she was cheerful; pulse 70, temperature 36°·2 C. (97° Fahr.); and she convalesced rapidly. In this case camphor behaved as a true antidote: the toxic symptoms disappeared entirely four hours after beginning the camphor. Bufalini and Sinler recommend a mixture of camphor and carbolic acid, which they affirm to be in every respect superior to carbolic acid as a dressing for wounds. It is not caustic, and can be used in large quantities without danger of poisoning.

G. D'Arcy Adams, M.D.

2603. *Racine on Lead Mania.*—Dr. Racine, of Catternberg, communicates to the *Deutsche Med. Wochensch.*, of March 6, a case of lead mania, occurring in a coal-miner, aged 38. On the day after the first feeling of dragging pains in the forearm, the patient suddenly lost consciousness towards evening, and after lying in that condition over another whole day, delirium suddenly broke out on the fourth day, the patient crying out that 'the Devil was in his body.' This lasted more or less for two days more, until on the evening of the sixth day he fell asleep, and woke next morning perfectly clear in the head, but without the least recollection of what had happened. When he was able to return to work, his memory was still very weak, so far as remembering dates of past events, or making calculations, was concerned, although he was perfectly well able to carry on his somewhat responsible work in the mine. After treatment by iodide of potassium this weakness improved considerably, so that he could calculate correctly, although rather slowly, and could again remember the important events of his life. As all nervous affections, hereditary or otherwise, could be disproved, the only remaining cause for such symptoms was lead-poisoning; and the difficulty then became the discovery of the source of the lead, as slighter symptoms were also found in his wife and all his children except the youngest, aged 2. The water-supply was uncontaminated, and the cause was at last found in a large tin coffee-pot, the metal of which contained 20 per cent of lead.

Alice Ker, M.D.

2604. *Tchugin on Poisoning by Herrings.*—In the *Vratch*, No. 2, 1883, p. 27, Dr. V. Tchugin details three cases of poisoning, which occurred in a pauper family, in three previously healthy children, aged 13, 6, and 3, after the patients had eaten several salted herrings. They presented the following symptoms (which began to manifest themselves within a few hours after the meal); nausea, vomiting, constant agonising pain in the stomach, intense thirst, tympanites, constipation, anuria (in one), præcordial pain, weakness of the pulse, indistinctness of the cardiac sounds, paleness and œdematous swelling of the face, headache, ptosis (in one), dilatation of the pupils, sleeplessness, general weakness. The two younger patients died, one in three, another in five, days from the appearance of the first symptoms. The third patient slowly recovered (in three weeks). On the *post mortem* examination, there were found hyperæmia of the cerebral dura mater; accumulation of a reddish serous fluid in the cavities of the pleura, pericardium, and peritoneum; and hyperæmia of the gastro-intestinal mucous membrane, and of the liver. Chemical examination gave negative results.

V. Idelson, M.D.

2605. *Montalti on the Detection of Alcohol in the Body in Cases of Poisoning by it.*—A case in which five days after death alcohol was procured by distillation from the brain and liver, set the author to find out: (1) whether, when the cause of death was not known, the expert had any means of showing whether alcohol was the cause of death; (2) how long after death could alcohol be detected chemically, the corpse remaining in the open air; (3) how long after death it could be detected when the corpse was under water. The tests used to distinguish alcohol in the distillate were two—namely, bichromate of potash with sulphuric acid, and caustic potash with iodine. Eight experiments were made in all. The animals selected were rabbits. Four were allowed to putrefy in the air, four under water. The results were somewhat surprising. The possibility of discovering the spirit depended on the stage of putrefaction, whether the body had been exposed to air or to water. Even after so long a period as twenty-four days had elapsed from the

time of death, alcohol was still to be found in the liver. The weather, too, at the time was somewhat warm, and decomposition was far advanced. The author, in summing up, says that the quantity of alcohol found, taken in connection with the stage of putrefaction, will enable one to say approximately whether acute alcoholism was the cause of death or not. The lungs and brain, too, are always found hyperæmic in death from alcohol. The spirit is found especially in the liver, brain, and spinal cord; and, as these organs are very much larger in man, a proportionately greater quantity would be found in the human subject. The importance of testing for alcohol is then pointed out.

WILLIAM R. HUGGARD, M.D.

2606. *Oliver on Carbolic Poisoning in a Child.*—Dr. Oliver, in the *Med. Times and Gazette*, March 1884, p. 282, publishes notes of a case where a child, aged 2 years, had taken a cup of carbolic acid in mistake. The dose taken was at least half an ounce of McDougall's 'Patent Sewage Carbolic Acid.' Ten minutes after taking the poison the child was quite insensible, the pupils were contracted and inactive to light, the muscles were everywhere relaxed. Temperature, 94°·8. Three ounces of olive-oil were poured down the throat, and a dose of sulphate of zinc was given; ten minims of ether were also injected hypodermically, followed by two drachms of brandy. For two hours the patient remained in a very critical state, but gradually revived under small doses of brandy. The next day symptoms of laryngitis came on, which gradually spread to the bronchial tubes, and a sharp attack of bronchitis followed. Within a month the child was quite well, and was running about as usual. [Among the cases noted in sect. 354 : 4 in the *Medical Digest* is one of recovery after swallowing four ounces of carbolic acid.—*Rep.*]

2607. *Booth on a Case of Chloral Poisoning treated by Belladonna.*—Mr. Booth, in the *Lancet*, March 1884, p. 468, publishes a case in which the antagonism of chloral-hydrate and belladonna was strikingly manifested. A man, aged 40, had been drinking heavily for more than a week; then the author was called in, to find him in a violent state of delirium. The patient had taken a sleeping draught obtained from a druggist, but it produced no effect. A mixture was ordered, containing two drachms of chloral and one of bromide of potassium, a fourth part of which was to be given at once, and repeated, if necessary, in half an hour. The patient, however, obtained the bottle and drank the whole of its contents. He soon fell asleep, and became pale and livid, with shallow weak respiration, and quick weak pulse (120 to 140). Nearly a teaspoonful of tincture of belladonna was given. This soon restored the shallow respiration and regulated the pulse, and he made a good recovery. Belladonna, from its powerful action on the centres of circulation and respiration, has been successfully used in cases of poisoning by aconite and Calabar bean; and by its means the circulation and respiration can be kept up during the administration of large doses of morphia or opium, without interfering with their anodyne and hypnotic effects. It was with a knowledge of these facts that Mr. Booth tried its use as an antidote in chloral poisoning, and his success makes the use of the drug worthy of a further trial.

RICHARD NEALE, M.D.

PATHOLOGY.

RECENT PAPERS.

2608. LACERDA.—Beri-beri. (*A União Medico*; and *Il Siglo Medico*, Jan. 6, 1884.)

2609. ROVIGHI.—On Adenoma of the Liver. (*Arch. per le Scienze Med.*, Vol. vii., No. 8, and *Gazz. Med. Ital. Prov. Venete*, Feb. 16.)

2610. HAHN.—Hydatid Cysts in Bone. (*Berlin. Klin. Wochensch.*, No. 6, 1884.)

2611. GORALEVITCH, J. A., AND STRUWE, K. V.—On Leyden's Crystals in Asthmatic Sputa. (*Proceedings of the Caucasian Medical Society*, 1883, No. 10, pp. 284–87.)

2612. RICHARDS, V.—The Poison contained in Choleraic Alvine Discharges. (*Indian Med. Gazette*, April.)

2613. CRAIG.—A Case in which the Rectum terminated in the Urethra. (*Edin. Med. Jour.*)

2614. OZENNE.—The Combination of Cancer and Syphilis. (*Union Méd.*, April.)

2615. ZIEHL.—The Micrococcus of Pneumonia. (*Centralbl. für die Med. Wiss.*, Feb. 7.)

ART. 2608. *Lacerda on Beri-beri.*—Dr. Lacerda, in *A União Medico* of Rio Janeiro, reports his discovery of the micro-organism of beri-beri. Several sailors from the corvette *Nictheroy* were admitted to the Marina Hospital, suffering from well-marked beri-beri with dropsy and paralysis. Blood was taken from six of these sailors and preserved in capillary tubes. The cultivations made with this blood in neutral sterilised meat-broth showed, with a power of 600 diameters, numerous micro-organisms similar to the bacteria of carbuncle. The micro-organism presented itself under the form of translucent filaments, some so large that they occupied more than half the field of the microscope; some appeared articulated or segmented; others were curved and twisted, looking like a bundle of cords; others appeared reticulated; and some filaments, which were isolated from the net-work, seemed articulated with incipient ramifications. In the interior of the most developed filaments brilliant corpuscles were noted; these corpuscles, which could be nothing else but spores, were found scattered through the whole filament, but being almost constantly perceived at the points of union of the segments or articulations. Often, from fracture of the larger filaments, the fragments looked like compasses open at an obtuse angle. At various points of the preparation, appeared large masses of agglomerated spores. The purity of the cultivation was shown by the absence of other germs than those described. Many cultivations with the blood of other patients were made, and in all the same micro-organism was developed. Three guinea-pigs were inoculated with the fluid of the first cultivation. One died twenty-four hours afterwards; the lungs were congested, and the blood very fluid. With the microscope, the blood-corpuscles were found to be altered; at various points of the preparations small masses of spores were seen and straight translucent motionless filaments. There were no micrococci or bacteria of putrefaction. The cultivation of the blood of this animal reproduced at the end of some days the micro-organism in complete development. With the blood of this same animal, taken from the heart and diluted with water, three other guinea-pigs were inoculated. Two of these

died three days later, and their blood contained the micro-organism, but not fully developed. The two surviving guinea-pigs of the first experiment were again inoculated with the blood of these two, and both died. A sheep inoculated with the blood showed no signs of beri-beri, notwithstanding the great similarity of the micro-organism to that of anthrax. Two rabbits were inoculated, and five days later one died. The lungs and liver were congested, the muscles were pale, the blood black and fluid. In various points of the serous membranes, and in the parenchyma of the liver, numerous white granulations, smaller than a pin's head, rough to the touch, were seen. On the surface of the pericardium, and especially on the pleura, the same granulations were numerous. The red corpuscles were much enlarged and altered, and showed a tendency to fuse into irregular yellow or red masses. The blood contained agglomerations of spores and filaments, as large rods straight or curved, motionless, just as are found in the first twenty-four hours of the cultivation of the blood of a patient suffering from beri-beri. The granulations from the serous membranes consisted of spores and miniature filaments. The spinal marrow was less consistent than in the normal state. In the midst of the medullary nerve-tissue numerous large filaments of the micro-organism were found, interlaced and sporigenous. Although, in the short time the animal lived after inoculation, no perturbations of motility or sensibility were noticed, it is presumable that these would have succeeded had the animal lived longer.

2609. *Rovighi on Adenoma of the Liver.*—The author gives the clinical history and description of two cases of tumours, arising primarily in the liver, without giving rise to metastasis in other organs, or to infiltrations of the lymphatic glands (*Arch. per le Scienze Med.*, Vol. vii., No. 8). The disease in both subjects had a very rapid course of four to five months, and manifested itself with symptoms of altered gastric and intestinal function, with acute pains in the right hypochondrium, with ascites, and rapid loss of flesh. The nodules, which constituted the neoplasm developed in the first of the cases examined by him, were formed by an elegant interlacing of closed cellular cylinders, and composed of elements analogous to those which lined the biliary canaliculi. In some preparations he was able to see a direct relation of the biliary canaliculi with the cellular cylinders from which resulted the neoplastic nodules. In the second case, instead, the nodules of the neoplasm appeared formed of cells analogous to hepatic cells. Moreover, in the peripheral parts of the nodule were seen hepatic cells which had lost their natural deposition, and in most of these existed gross elements with divided nucleus, which signified a proliferation of the neoplastic elements. Rovighi classes the two tumours observed by him among adenoid hepatic tumours. He refers to analogous cases observed by others, and to the discrepancy of opinion as to their origin; since, while some consider that adenomata of the liver are always derived from the hepatic epithelium, others trace their origin to the epithelium of the bile-ducts. These cases of his help to solve the question in argument: in the first, the origin of the neoplasm from the epithelium of the bile-ducts was evident, while in the second the origin was in the epithelium of the hepatic acini; hence adenoma may start from both sources. He maintains that between adenoma and primitive cancer of the liver there are no precise differential characteristics, and he proposes to call the tumours described by him primary adeno-carcinoma of the liver. G. D'Arcy Adams, M.D.

2610. *Hahn on Hydatid Cysts in Bone.*—In a paper read before the Berlin Medical Society in December last (*Berliner Klin. Wochensch.*, No. 6, 1884), Dr. Eugen Hahn reported a case of hydatid cysts in the lower third of the right femur and the head of the right tibia. The patient was a single woman aged 52, who for five years had suffered from slowly growing and very painful tumours situated just above and below the right knee. The nature of these tumours had been diagnosed early in the course of the case, and puncturing with injection of carbolic acid had been repeatedly practised. Finally, on Dec. 3, 1883, amputation was performed in the lower third of the thigh. The lower part of the shaft of the femur contained a large cyst which had extended downwards as far as, but not into, the epiphysis. In the cancellous tissue of the internal condyle were several sequestra, and many hydatid cysts varying from the size of a pin's head to that of a pea. The internal condyle of the tibia contained a cyst as large as a hen's egg, and the upper half of the diaphysis of this bone was studded with smaller cysts. In his remarks on this case, Hahn alludes in the first place to the extreme rarity of the disease in bone. In 28 only of 985 cases of hydatid disease collected by Neisser was any bone the affected organ. This rarity is to be attributed to the fact that the embryo of the tænia echinococcus must have to take a long course to reach any bone from the intestinal canal. Of the three hypotheses that have been proposed to explain how the embryo may reach any enclosed organ, not one can be regarded as decisive, as no wandering embryo has yet been observed. It is not at all probable, Hahn holds, that migration can take place along the bile-ducts. The embryo, being devoid of any organ of locomotion, cannot make way against the bile stream; and, moreover, there must be some other mode of transmission to account for the occurrence of hydatid cysts in other organs than the liver. If the embryo be carried to the future seat of disease by the blood-vessels, then on its way from the stomach to any remote organ it must pass through two capillary systems, that of the liver in the first place, and subsequently that of the lungs. What seems to be the most likely and simple way is that by the lymphatic system. The embryo might, it is readily conceived, be taken up by some lymphatic of the intestinal wall, be carried through the thoracic duct to the innominate vein, and thence be passed to the right side of the heart and through the pulmonary capillary system. If this view, however, were to be accepted, great difficulty would be found in accounting for the fact that the liver, as compared with other organs, is so frequently affected. This organ was the seat of the disease in 40 out of 144 cases collected by Davaine, and in 451 of the 983 cases collected by Neisser. Then, follow in order of frequency, the lungs, kidneys, cranial cavity, muscle, and bone. Of the thirty-three cases of hydatid cysts in bone that have been collected by Reszey, in eight the tibia was affected, in seven the humerus, in five the pelvic bones, in four the femur, and in four each the cranium and vertebral column.

W Johnson Smith.

2611. *Goralevitch and Struwe on Leyden's Crystals in Asthmatic Sputa.*—In the sputa from a case of nervous bronchial asthma, Drs. J. A. Goralevitch

and K. W. Struwe, of Tiflis (*Proceedings of the Caucasian Medical Society*, 1883, No. 10), have found peculiar crystals which were described in asthma first by Leyden, and later by Unger, Eichhorst, and others, and which are identical with those discovered by Friedreich in putrid bronchitis, by Charcot in leucæmic blood, and by Bötcher in semen. Like Leyden and Eichhorst, the authors think that the presence of these crystals in asthma is etiologically connected with the occurrence of paroxysms. It is interesting to note that on two occasions they observed, simultaneously with the appearance of Leyden's crystals in the sputa, the formation of unusually numerous crystals of oxalate of lime in the urine. The patient suffered from a severe form of asthma for fifteen years; the paroxysms occurred daily in spite of continuous treatment, until he came under Dr. Goralevitch's care. The administration of iodide of potassium, in daily doses of from 24 to 30 grains, led to a rapid and striking relief of the patient's sufferings.

V. IDELSON, M.D.

2612. *Vincent Richards on the Poison contained in Choleraic Alvine Discharges.* — Mr. Vincent Richards published in the *Indian Med. Gazette*, March, an account of some experiments on dogs made with choleraic dejections; he failed to obtain positive results. In the April issue he reports positive results obtained by experiments on pigs. In his first experiment he gave to a pig three months old a choleraic discharge which had just been evacuated; the animal became very restless, vomited, and died. In a second experiment the semi-solid contents of the intestine of a pig killed by the alvine discharges of a cholera patient were given to a half-grown pig; the animal was not affected; the same pig subsequently took the alvine discharges of a patient who recovered, but was at the time apparently suffering from the first stage of cholera; the animal recovered, but in a subsequent experiment, died one hour and twenty-eight minutes after the administration of an undoubted choleraic evacuation. Other experiments seemed to show that the evacuations, if kept more than a few hours, lost their poisonous properties. The administration of fresh evacuations was followed by death in from fifteen minutes to two hours and fifty minutes. Mr. Vincent Richards thus summarises the conclusions at which he has arrived. 1. That choleraic evacuations, at certain stages of the disease, contain a most virulent poison. 2. That if the poison finds its way into the stomach, it is absorbed and rapidly proves fatal. 3. That the principal action of the poison is not an organism, but of the nature of a chemical compound of a comparatively unstable nature. 4. That it will probably be found to be easy to destroy the power of the poison existing in the evacuations; in other words, to disinfect them. 5. That although the poison decomposes, it might by desiccation retain its powers for some considerable time. Hence clothes, &c., stained with choleraic discharges, might be a source of danger.

2613. *Craig on a Case in which the Rectum Terminated in the Urethra.*—Dr. William Craig (*Edin. Med. Jour.*) records the case of a child in whom the fæces were passed through the penis. There was a well-marked raphé and depression in the region of the anus, but no trace of an anal opening. An exploratory operation failed. The child survived eighteen days, suffering intense agony from the passage of the fæces. After death the pelvic organs were removed *en masse*, and, after hardening, a section was made in the middle line of the penis, bladder, and the lower part of the rectum. The wall of the bladder was slightly hypertrophied. There was no communication between the rectum and the bladder, but in front of the prostate gland the rectum entered the membranous portion of the urethra; the first and second parts of the rectum were well developed, the latter being somewhat dilated behind the place where it opened into the urethra. The third portion of the rectum was completely undeveloped. Dr. Craig considers that the malformation was produced partly by failure in the development of the septum between the *sinus uro-genitalis* and the intestine (which appears about the fourth week of intra-uterine life), partly by failure in the development in the lower portion of the rectum, and possibly to a certain extent by a failure in the invagination, which forms the anal opening, to proceed far enough. The malformation, which is stated to be very rare, is well illustrated by a lithograph, and the two halves of the specimen will be placed in the Anatomical Museum of the University of Edinburgh, and in the Museum of the Royal College of Surgeons of Edinburgh respectively.

DAWSON WILLIAMS, M.D.

2614. *Ozenne on the Combination of Cancer and Syphilis.* — According to the author (*Union Méd.*, April 1884) these two diatheses may be combined, and the hybrid lesions thus produced may assume three different forms; cancero-sclerous, cancero-gummous, and cancero-sclero-gummous. They are most frequent in the buccal cavity, but may be found elsewhere. Syphilis seems to favour the development of cancer, but to diminish some of its symptoms, for example, pain.

J. S. KAESER, M.D.

2615. *Ziehl on the Micrococcus of Pneumonia.*—As far back as June 1883, Dr. F. Ziehl (*Centralbl. für die Med. Wiss.*, No. 25) called attention to the fact that the micrococcus of pneumonia could be recognised with comparative ease in the sputum of that disease. Still more recently (*Ibid.*, Feb. 7, 1884, and *Medical News*) he reiterates this statement. The distinctive feature of this micrococcus is the hull or capsule of mucous or gelatinous substance which Günther was the first to discover, and which Friedländer also describes as being very characteristic. It is extremely rare upon other micrococci; in fact, as good as absent in all other micro-organisms found in the human body, except the lepra bacilli, from which its shape easily distinguishes it. This capsule may surround a single coccus, or it may contain again two, three, four, or even more. It is not, however, invariably demonstrable, because from cocci it is absent, and in certain others it is not easily discerned, while sometimes empty capsules are found. Specimens are best prepared by treating the dried sputum with a watery solution of gentian violet, and examining the coloured preparation in a drop of water. The demonstration of these micrococci in sputum, says Ziehl, has not merely an etiological, but also a diagnostic value, as they are found even before the physical signs are distinctive, or the rust-coloured sputum has made its appearance; and when it is remembered how often these symptoms are wanting when the physician is first called, we may have in the finding of the organism in the sputum of pneumonia an assistance to diagnosis just as valuable as the bacillus of tuberculosis

DISEASES OF THE THROAT AND NOSE.

RECENT PAPERS.

2616. LEFFERTS.—New Facts in Laryngology. (*Annual Congress of the American Laryngological Association*, May 1883.)

2617. SMITH.—Adhesion of the Velum of the Palate to the Walls of the Pharynx. (*Ibid.*)

2618. LANGMAID.—A Common Form of Vocal Disability resulting from Pathological Processes. (*Ibid.*)

2619. KNIGHT.—Chorea Laryngis. (*Ibid.*)

2620. JOHNSON.—Congenital Tumours of the Larynx. (*Ibid.*)

2621. ELSBERG.—Reflex Phenomena due to Nasal Disease. (*Ibid.*)

2622. BRIEGER.—Complication of Diphtheria by Inflammation of the Thyroid Gland. (*Allg. Med. Central-Zeitung*, No. 67, 1883.)

2623. M'LEOD.—A Case of Extirpation of the Larynx. (*Lancet*, Sept. 15, 1883.)

2624. SEMON.—Paralysis of Single Fibres of the Recurrent Laryngeal Nerves. (*Berliner Klin. Wochensch.*, 46, 1883.)

2625. SIMANOWSKY.—Regeneration of the Epithelium of the True Vocal Cords. (*Centralbl. für die Med. Wiss.*, 41, 1883.)

2626. LAUTERBACH.—Foreign Body in Trachea: Tracheotomy: Difficulty of Breathing without the Cannula. (*Philadelphia Med. Times*, Nov. 1883.)

2627. SEMON.—Throat Department of St. Thomas's Hospital. (*St. Thomas's Hospital Reports*, Vol. xii.)

2628. COUPARD.—Pharyngo-Laryngeal Epithelioma. (*Revue Mensuelle de Laryngologie*, Feb. 1884.)

2629. MULHALL.—Syphilitic Ulceration of the Pharynx. (*St. Louis Med. Chirurg. Jour.*, July 1883.)

2630. LAUTERBACH.—Polypus of the Nose inserted upon the Septum. (*Philadelphia Med. Times*, Nov. 3, 1883.)

2631. FOÀ.—On a Rare Form of Tuberculosis of the Larynx. (*Archiv. delle Scienze Med.*, Vol. vii., No. 13; and *Gazz. Med. Ital. Prov. Venete*, Feb. 23.)

2632. CIEKAWY AND TALKO-HRYNCEWICZ.—A Case of Prolonged Presence of a Foreign Body in the Air-Passages. (*Medycyna*, and *Vratch*, No. 4, 1883, p. 59.)

2633. MACKENZIE.—Hypertrophy of the Mucous Membrane of the Nose. (*Annales des Mal. de l'Oreille, du Larynx*, &c., December 1883.)

ART. 2616. *Lefferts on New Facts in Laryngology.* This and the following five papers were read at the fifth annual Congress of the American Laryngological Association in New York, May 1883. Dr. Lefferts relates two cases of an affection attracting hitherto but little attention, which Charcot has described as laryngeal vertigo. Its clinical history is somewhat as follows. A strong, apparently healthy, man—say, whilst sitting at table—is seized with a short cough, and falls to the ground unconscious, but without muscular movements; almost directly he rises, and resumes his conversation as if nothing had happened. Such attacks are rare; they are more often attended by fits of partial unconsciousness, but are always accompanied by the same paroxysmal cough. Even the worst attacks are not preceded by a cry, nor followed by confusion of ideas. Dr. Lefferts regards them as epileptiform, with the aura beginning in the larynx. In the discussion that followed, Dr. Elsberg was of opinion that the cases were those of adductor spasm, such as Hack had reported. Dr. Knight suggested that the unconsciousness might be caused by respiratory disturbance, in the same way that rapid breathing might determine it.

2617. *Smith on Adhesion of the Velum of the Palate to the Walls of the Pharynx.*—This case presented an almost complete separation of the cavity of the naso-pharynx from that of the mouth. It was due to syphilitic ulceration.

2618. *Langmaid on a Common Form of Vocal Disability resulting from Pathological Processes.*—The voice of professional singers is sometimes found to fail at a certain point in the scale, while below this point it may be normal—a condition which usually follows prolonged and excessive use of the voice, or which may happen as a result of sudden cessation of using the voice after its very active exercise. Examination of the larynx shows the usual appearance of fatigue and relaxation of the vocal cords. The failure in singing the scale from below upwards occurs precisely at the point where the so-called change in the register occurs. The practice of falsetto upon these notes will eventually produce similar effects upon the larynx.

2619. *Knight on Chorea Laryngis.*—Dr. Knight described some cases which presented rhythmical movements of the palate and laryngeal muscles. Where the expiratory muscles are likewise affected, a barking cough is present. The co-existence of hysteria, general chorea, or the neurotic temperament would confirm rather than not the diagnosis.—[Cases of chorea laryngis will be found reported in the LONDON MEDICAL RECORD, 1880, pp. 244, 245.—*Rep.*]

2620. *Johnson on Congenital Tumours of the Larynx.*—Five cases were reported. In all, the growths were papillomatous. Tracheotomy or thyrotomy, and removal of the growth, were recommended. Dr. Johnson thinks that their occurrence in early life renders them liable to be mistaken for croup.

2621. *Elsberg on Reflex Phenomena due to Nasal Disease.*—Among the many affections that have been relieved by attending to the accompanying nasal disorder, the author gives instances of croup, melancholia, chorea, reflex epilepsy, neuralgia, gastric disturbance, uterine disorders, affections of the mucous membrane of the genito-urinary tract, pain and disturbance of special senses, vocal difficulties, glottis spasm, and bronchial asthma.

2622. *Brieger on Complication of Diphtheria by Inflammation of the Thyroid Gland.*—The author (*Allg. Med. Central-Zeitung*, No. 67, 1883; *Revue Mens. de Laryng.*, Jan. 1884) has observed two cases. In the first, the complication began on the third day of the diphtheria, and twenty days afterwards an abscess in the thyroid body had formed and was opened. In the second, the inflammation was from the beginning kept down by energetic antiphlogistic measures. In both cases the inflammation of the thyroid gland terminated before the local diphtheria. The author believes the same micro-organism to be the direct cause both of the diphtheria and of the thyroiditis.

2623. *M'Leod on a Case of Extirpation of the Larynx.*—This case is reported in the *Lancet*, Sept. 15, 1883. The patient, aged 35, was the subject of an epithelioma, situated in the anterior part of the neck over the larynx. His voice had been hoarse for about a year, and a swelling of the right side of the neck had been perceived for six months. Respiration was not impeded. No laryngoscopic examination was made. The larynx was removed, the

patient making a good recovery from the operation. The wound cicatrised in a month's time. The patient died 5½ months after the operation, of a pulmonary affection, and at the necropsy tubercle was found in the lungs, but there were no signs of the return of the tumour.

2624. *Semon on Paralysis of Single Fibres of the Recurrent Laryngeal Nerves.*—Dr. Semon publishes an exhaustive paper upon this subject in the *Berliner Klin. Wochensch.*, No. 46, 1883, which, to be dealt with fairly, should be read. In a former paper in the *Archives of Laryngology*, Vol. ii., July 3, 1881, he has already shown that, in cases of central or peripheral lesions of the motor laryngeal nerves, the abductors are not only the first to become affected, the adductors only becoming so in the further course of the affection ; but also that the paralysis may be entirely limited to the abductors, and the adductors remain intact throughout. During the three years subsequent to the publication of this paper Dr. Semon had come across thirty-six fresh cases of paralysis of the crico-arytenoidei postici (making, with his former published cases, fifty-eight altogether) ; and these offer additional evidence as to the soundness of his former conclusions upon the subject. In no case of the same or similar lesions of the nerves has he ever found the paralysis limited to the adductors. Of the cases that have recently come under Dr. Semon's personal observations, in six the paralysis was bilateral, and in sixteen unilateral ; while in the cases that he has collected from outside sources nine were bilateral and five unilateral. He attributes the fewness of the cases of unilateral paralysis among this latter group to the fact, that the attention of surgeons has hitherto been almost monopolised by cases of bilateral paralysis of the abductors, to the exclusion of unilateral paralysis. In the former, the symptoms are so marked they cannot be overlooked ; while in cases of purely unilateral paralysis of the adductors there are neither any respiratory or vocal symptoms that can draw the attention of the surgeon to the organ. In three years he, a single observer, has come across sixteen such cases ; and in many of these the patient did not complain of any laryngeal trouble at all, while in four cases the discovery of the paralysis has been the means of finding out serious constitutional affections (aneurism of the aorta, carcinoma of the œsophagus). Dr. Semon therefore insists upon laryngoscopic examination as a duty in all present or supposed organic affections which may attack the motor laryngeal nerves, even although there be no laryngeal symptom which appears to directly demand such an investigation.

2627. *Semon on the Throat Department of St. Thomas's Hospital.*—In the *St. Thomas's Hospital Reports* (Vol. xii.), Dr. Semon contributes a paper on the experience of the past year in the throat department. He gives in greater or less detail a few cases, some of which are of much interest, and terminates with the tabular statistics of the whole material of the department.

2628. *Coupard on Pharyngo-Laryngeal Epithelioma.*—The patient (*Revue Mensuelle de Laryngologie*, February 1884) was a man, 68 years old, had had trouble in deglutition for a year, and could now only swallow liquids. Respiration was not impeded, and his health was otherwise good. On laryngoscopic examination, a lobulated tumour, apparently springing from the back of the cricoid cartilage, was seen. There was no ulceration, no enlargement of the glands. Increasing trouble of deglutition led Dr. Coupard to attempt the removal of the tumour. This was done in three sittings by means of the galvano-cautery heated to a dull red. Microscopic examination of the tumour revealed its epitheliomatous nature. The patient regained his usual health, though he still had some slight difficulty in swallowing. Four months later, in consequence of a severe chill, he fell ill of bronchitis. In the course of ten days ulceration appeared about the larynx and pharynx, the glands became enlarged, total obstruction of the pharynx ensued, and the patient died about a fortnight later.

2629. *Mulhall on Syphilitic Ulceration of the Pharynx.*—In this case (*St. Louis Med. and Chir. Jour.*, July 1883) the patient, a man aged 40, presented a syphilitic ulceration of the pharynx for which iodide of potassium was prescribed, 1½ gramme (22 grains) daily. The third day he spat up blood and continued doing so for ten days, though the ulcers had healed. By alternately prescribing and leaving off for a time the iodide of potassium, Dr. Mulhall was able to assure himself that the hæmoptysis was entirely due to this drug. W. J. WALSHAM.

2631. *Foà on a Rare Form of Tuberculosis of the Larynx.*—Writers of pathological anatomy have long differed much in their description of the different products of tuberculosis of the larynx. At present the production of miliary nodules which tend quickly to soften and ulcerate, as well as the rapid formation of superficial or deep ulcers, accompanied or not by an inflammatory process of the laryngeal mucous membrane, are generally ascribed to this form. The author (*Archiv. delle Scienze Med.*, Vol. vii., No. 13) describes a case which he observed in the larynx of a woman who had died of phthisis pulmonalis, and which was unusual from the unaccustomed aspect assumed by the laryngeal tuberculosis. Numerous vegetations were noticed at the base of the epiglottis, in the neighbourhood of the arytenoid cartilages, and near the vocal cords ; these vegetations appeared either isolated, or confluent in little cauliflower masses, while the epithelium of the mucous membrane was everywhere intact. Microscopically the vegetations or condylomata were seen to be formed by an epithelial investment and by connective tissue, in which were glandular acini. Here and there were seen giant-cells, and the presence of the tubercular bacillus was demonstrated by Ehrlich's method in the tissue of the granulations as well as in the giant-cells. This, then, was a rare case of true tuberculosis of the larynx, condylomatous in form. G. D'ARCY ADAMS, M.D.

2632. *Ciekawy and Talko-Hryncewicz on a Case of Prolonged Presence of a Foreign Body in the Air-Passages.*—Drs. Ciekawy and Talko-Hryncewicz (*Medycyna*, and *Vratch*, No. 4, 1883) communicate the case of a girl, aged 5, who swallowed a seed of water-melon, and soon afterwards began to complain of intense pain and burning in the throat ; then dyspnœa, hoarseness, and cough appeared. The case was recognised as chronic laryngitis, and treated accordingly. In course of time the asphyctic paroxysms began to occur more often ; and at last, during one of them, the child expectorated a large lump of thick pus enclosing the swallowed seed, after which complete recovery followed. The seed remained in the trachea (the authors think) exactly eleven months. V. IDELSON, M.D.

2633. *Mackenzie on Hypertrophy of the Mucous Membrane of the Nose*—Dr. Morell Mackenzie

(*Annales des Maladies de l'Oreille, du Larynx, &c.*, Dec. 1883) recommends in the treatment of chronic hypertrophy of the inferior turbinated body the daily use of gum elastic bougies (which at first should only remain in the nose a few minutes), combined with the use of mild alkaline sprays. Failing these measures, he advises either destruction of the redundant tissue by the electric cautery and London paste, nitrate of silver, or glacial acetic acid, or else its removal by means of the wire snare, after it has, if necessary, been transfixed with a needle. At the same time he warns against unnecessary aggression in this tender region, and expresses his fears that 'the nasal passages have occasionally been cleared with the zeal and energy of an industrious backwoodsman' [a proceeding against which we should have hoped it would have been unnecessary to protest.—*Rep.*]. Three figures illustrating the disease accompany the paper, one of which, showing hypertrophy of the posterior three-fourths of the lower turbinated body, is taken from a specimen in the Museum of the Royal College of Surgeons. [Additional interest attaches to this paper, as it is an extract from the second volume of the author's Manual, which has been unfortunately destroyed in the recent fire.—*Rep.*]

E. Cresswell Baber, M.B.

SYPHILOGRAPHY.

RECENT PAPERS.

2634. Davies-Colley.—On Acute Gonorrhœal Rheumatism. (*Guy's Hospital Reports*, 1883, p. 187.)

2635. Morel.—Gonorrhœa and Affections of the Heart. (*Revue de Thérap.*, No. 20, 1883.)

2636. Post.—Rickets and Congenital Syphilis. (*Boston Med. and Surg. Jour.*, Oct. 4, 1883.)

2637. Berger.—Syphilitic Stricture of the Rectum. (*Gaz. des Hôpitaux*, No. 139, 1883.)

2638. Dreyfous.—Late Inherited Syphilis. Multiple Osseous Lesions. (*Annales de Derm. et de Syph.*, No. 12, 1883.)

2639. Simes.—Can Syphilis acquired during Pregnancy infect the Fœtus? (*Polyclinic*, Dec. 15, 1883.)

2640. Williams.—Chancre on the Conjunctiva. (*Lancet*, Jan. 5. 1884.)

2641. Wood, H. C.—Syphilis of the Brain and Membranes; Second Lecture. (*Boston Med. and Surg. Jour.*, Jan. 10, 1884.)

2642. Post.—A Case of Cerebro-spinal Syphilis. (*Ibid.*)

2643. Skene.—Vaginitis and Vulvitis. (*Phil. Med. News*, Jan. 12, 1884.)

2644. Mickle.—Visceral and other Syphilitic Lesions in Insane Patients without Cerebral Syphilitic Lesions. (*Jour. of Mental Science*, Jan. 1884.)

2645. Lydston.—Infection of a Family by an Infant with Inherited Syphilis. (*New York Med. Record*, Jan. 12, 1884.)

2646. Kohn.—A Contribution to the Study of Hereditary Syphilis of the Naso-pharynx. (*New York Med. Record*, Feb. 2, 1884.)

2647. Aubert.—A Practical Method for Limiting Injections to the Anterior Portion of the Urethra. (*Lyon Médical*, No. 6, 1884.)

2648. Yeo.—A Case of Pyrexial Syphilis. (*Lancet*, Feb. 16, 1884.)

2649. Price.—Gummatous Tumour in the Substance of the Cerebrum. (*Ibid.*)

2650. Derignac and Moussous.—Gonorrhœal Endocarditis. (*Gaz. Méd. de Paris*, No. 7, 1884.)

2651. Detmold.—The Diagnosis and Treatment of Syphilis. (*Boston Med. and Surg. Jour.*, Feb. 28, 1884.)

2652. Ignatieff.—Syphilitic Ulcers of the Intestine in Children. (*St. Petersburg Med. Wochensch.*)

2653. Triqueros, José.—On the Treatment of Syphilis without Mercury. (*El Siglo Medico*, March 9, 1884.)

2654. Hutchinson.—A Case of Syphilis in which the Fingers of One Hand became Cold and Livid. (*Med. Times and Gazette*, March, p. 347.)

2655. McVail.—The Treatment of Gonorrhœa by Open Wire Bougies. (*Brit. Med. Jour.*, March, p. 506.)

Art. 2634. *Davies-Colley on Acute Gonorrhœal Rheumatism.*—In a paper on this subject, published in the *Guy's Hospital Reports*, 1883, p. 187, Mr. Davies-Colley suggests that several distinct affections are confused together under the name of gonorrhœal rheumatism. He enumerates them as follows. 1. *Gonorrhœal synovitis*, a chronic affection, occurring in the male, generally in the knee-joints. Very rarely it is acute and goes on to suppuration. Of this kind the author has seen no example. 2. *Gonorrhœal arthritis*, an acute affection, occurring in women quite as often as in men, as a rule attacking at the outset several joints, and afterwards confined to one, most frequently the elbow-joint; affecting especially the fibrous tissues of the joint, and only secondarily the synovial membranes. 3. *Gonorrhœal inflammation of fibrous structures not connected with joints—e.g.* the plantar fascia, sclerotic, iris, pericardium, and endocardium: inflammations of the first three usually occur with chronic synovitis, and of the last two with gonorrhœal arthritis. With regard to the second or *arthritic* form of the disease, which forms the subject of this paper, the author summarises his remarks as follows. 1. It usually occurs during the acute stage of gonorrhœa or of some purulent discharge from the genital organs, in adult patients under middle age. 2. It occurs as often in females as in males, if not more often (of twelve cases recorded in this paper and in the *Obstetrical Journal* for June 1878, nine were females, five of whom were pregnant). 3. It may attack any joint, but most often the elbow (in eight of the twelve cases the elbow was the joint affected). 4. At first it attacks several joints, like acute rheumatism, and then confines itself, as a rule, to one joint. 5. Its seat is the fibrous tissues of the joint. There are great œdema, redness, pain, and tenderness. The ligaments are softened, and the cartilage may be disorganised. There is very little synovial effusion. Constitutional disturbance is but slight. 6. It may be confounded, at first, with acute rheumatism; later on with phlegmonous erysipelas, bursitis, lymphangitis, phlebitis, gout, and pulpy disease of the synovial membrane. 7. It rarely, if ever, suppurates, but it is especially prone to set up fibrous ankylosis. 8. The best treatment is to cure the discharge, keep the joint perfectly still, and apply uniform pressure as long as the acute stage lasts, and then to use passive motion. [An abstract of a paper on this form of arthritis, by MM. Duplay and Brun, will be found in the London Medical Record, Oct. 1881.]

2635. *Morel on Gonorrhœa and Affections of the Heart.*—M. Morel begins a paper in the *Revue Thérapeutique*, No. 20, 1883, by referring to his thesis, written in 1878, in which he collected a series of thirteen cases of cardiac affection in connection with gonorrhœa. He then relates a case which has lately been under his own care, and which, the

author says, differs from all other cases hitherto published, in that the affection of the heart preceded that of the joints. A man, aged 25, came under observation on Jan. 9, 1883, with a gonorrhœa of three weeks' duration. The symptoms were acute, with chordee and very frequent micturition. There had been no previous illness, and the man said his parents had never suffered from rheumatism or heart-disease. Under antiphlogistic treatment the patient was going on well when seen on the 16th. On the 26th M. Morel was sent for, and found the patient in bed. He said that on the previous evening he had been attacked with shivering and nausea. There was no pain anywhere. He complained only of a feeling of oppression, and of inability to breathe except in a sitting position. The joints appeared to be healthy. The heart's impulse was vigorous. At the apex there was heard a systolic bruit, which was conducted towards the axilla. At the base the sounds were normal. The discharge from the urethra had much diminished during the previous forty-eight hours. Mustard poultices were applied over the præcordial region, and bromide of potassium with digitalis was prescribed. In the evening the dyspnœa had disappeared, temperature 39°·2 C. (102°·6 F.); pulse, 110. He shivered again. Nothing wrong was discovered in the lungs or joints. The bruit was heard as before. On the 27th the physical signs were unchanged; temperature 39°C. (102°·2F.); pulse 100. Quinine was prescribed, as well as the bromide and digitalis mixture. In the evening the left knee was painful, red, hot, and slightly swollen; temperature 38°·6 (101°·5 F.); pulse 90. The discharge was slight; the bruit was as before. Four days later the temperature was normal; pulse regular. The bruit was distinct. The patient felt almost well. This state continued until February 17, when without any clear cause violent shivering occurred. Temperature 39°·8 (103°·7 F.), pulse 120. Nothing wrong was to be heard in the lungs. The bruit at the apex was as before, but now also a diastolic bruit was heard at the base. No more joints were affected. The discharge was slight. Under bromide of potassium and quinine, with Hoffmann's solution, the temperature rapidly fell, and was again normal on the 21st. Pulse, 70. The knee was hardly at all painful. The two bruits remained, the one at the base being much the most distinct of the two. On March 20 the patient was seen for the last time. The general health was then excellent, and there was no urethral discharge. The bruit had disappeared from the apex, but at the base the diastolic murmur was still plainly audible. The knee was somewhat stiff, and the joint crackled on movement.

2638. *Dreyfous on Multiple Osseous Lesions in Inherited Syphilis.*—This case is described in the *Annales de Derm. et de Syph.*, No. 12, 1883. The patient was a boy, aged 7, the elder of three children, who came under treatment in August 1883. He had scars on the buttocks, which were said to have resulted from sores which had appeared two or three weeks after birth. The father's syphilis dated from 1872. The mother was said to have shown no signs of the disease. In July 1882 the child had a swelling in the right leg, which disappeared under friction with mercurial ointment. For several months before coming under treatment he had dragged the right leg in walking, and for one month before there had been swelling of the right knee and enlargement of the lower part of the right arm. On admission, there were two symmetrical swellings on the sides of the frontal bone; a hard, regular, fusiform swelling on the lower third of the right humerus; periosteal swellings on the inner surface and anterior border of both tibiæ; slight depression of the nose; no trace of rickets. Under mercury and iodide of potassium, the swelling of the humerus gradually diminished.

2639. *Simes on Infection of the Fœtus by Syphilis acquired during Pregnancy.*—In the *Polyclinic*, Dec. 15, 1883, Dr. J. H. C. Simes states that he inclines to the opinion that syphilis contracted during pregnancy may be transmitted by the mother to a previously healthy fœtus, provided the affection in the mother has passed beyond the stage of initial lesion and is made manifest by constitutional signs. No cases are given in support of this conclusion, at which Dr. Simes says he has arrived from physiological and histological study rather than from clinical observation.

2644. *Mickle on Visceral and other Syphilitic Lesions in Insane Patients without Cerebral Syphilitic Lesions.*—Dr. W. J. Mickle reports (*Journal of Mental Science*, Jan. 1884) two cases of this kind. The first case was that of a soldier who was admitted into the author's asylum in January 1868, and died in January 1876, at the age of 34. On admission, the attack of mental disease was stated to be of eight months' duration. The insanity had been insidious in origin, but preceded by frequent manifestations of syphilis, and syphilis was the cause assigned for its appearance. Whilst he was under observation, nodes appeared on several bones, and subsequently there were signs of pleuritic thickening and pulmonary phthisis. After death, the changes in the membranes of the brain were only those often seen in chronically insane non-syphilitic subjects. In both lungs there were greyish-white nodules and pneumonic patches. In the left lung there was an excavation at the apex, surrounded by induration and fibrosis, besides puckered cicatrices and fibrous bands. These changes, Dr. Mickle remarks, led him to think of tuberculosis supervening on old syphilitic disease. The liver contained large gummata, and there were also perihepatitic adhesions. On the spleen was a large cartilaginoid plate of capsular thickening, and there was a gumma in the left kidney. Iodide of potassium had been given freely, and perchloride of mercury and opium sparingly. As regards the mental symptoms in this case, Dr. Mickle states that the patient had the intellectual feebleness and incoherence which form features of many cases of syphilitic origin. Latterly, he was a chronic dement, having at an early period exhibited some depression, and occasionally more or less excitement. There was, however, nothing distinctive in the mental symptoms, nor were there in any marked degree those conditions more usual to syphilitic mental disease in its ultimate stage. But here Dr. Mickle thinks the influence of the protracted anti-syphilitic treatment must be taken into account. He considers that the syphilitic poison produced mental disorder, either by toxæmia or by the combined influence of syphilis and anæmia, together with the exhausting and disturbing influence of the pain of local syphilitic affections of the bones and other parts. The second case, a much less marked one than the preceding, was that of a soldier, aged 37, who, when admitted into the asylum, was suffering from a second attack of mental disease. Except during his last illness, the patient had not spoken for about two years before his death. *Post mortem*, the liver was

found extremely puckered by cicatrices associated with gummatous remains. The end of the colon and the rectum were ulcerated. There were cirrhosis, bronchiectasis, vomicæ, and caseous nodules in the lungs, chiefly in the left one. The kidneys were granular, somewhat atrophic, and contained cysts. There were no syphilitic lesions of the brain or its membranes.

2645. *Lydston on Infection of a Family by a Syphilitic Infant.*—Dr. F. Lydston, of Chicago, reports (*New York Med. Record*, Jan. 12, 1884) the following case. A man caught syphilis in the sixth month of his wife's pregnancy. A few weeks later, she showed signs of primary syphilis. An apparently healthy child was born at term. A few weeks later secondary symptoms appeared in the mother. The child never showed any signs of syphilis, and appeared to be more than usually robust up to the age of two years, when it died of capillary bronchitis. The mother again became pregnant, seven months after the birth of the first child. Pregnancy ended at the eighth month. Syphilitic lesions appeared in the child during the second week after birth, and a week later it died. This child had been tended by its grandmother and her eldest daughter. In both these persons the initial lesion of syphilis appeared on the lip within a month, and in both cases was followed by general symptoms in due course. The grandfather was subsequently infected by his wife. The mother of these children afterwards had several healthy ones, she being under active treatment at the time.

2646. *Kohn on Hereditary Syphilis of the Naso-pharynx.*—Dr. S. Kohn reports (*New York Med. Record*, Feb. 2, 1884) the cases of two sisters and a brother who suffered from disease of the naso-pharynx. The only foundation for the diagnosis of syphilis was that their father had taken iodide of potassium when a young man. Case 1. Male, aged 28, had ozæna; he had a protruding forehead. The velum was adherent nearly throughout to the posterior wall of the pharynx; there was a small opening low down; cicatricial bands were present. Case 2. Female, aged 17, resembled the preceding one, except that the adhesion of the velum to the pharyngeal wall was complete. Case 3. Female, aged 23, had ozæna. The septum was nearly gone. There was necrosis of the vomer, and sinking of the bridge of the nose. The author states that in all three cases 'antisyphilitic and tonic treatment has been attended by all the success to be expected.' The four remaining children of the same family, the eldest, aged 30, and the youngest, aged 10, were apparently healthy.

2647. *Aubert on a Practical Method for Limiting Injections to the Anterior Portion of the Urethra.*—M. Aubert is of opinion that, when urethral injections are used by patients in the ordinary way, there is danger of the fluid passing beyond the bulbous portion of the urethra, and carrying contagious matter to the deeper parts of the canal. To obviate this he advises (*Lyon Médical*, No. 6, 1884) that a caoutchouc tube not larger than No. 11 or 12 (*Charrière*), and from 10 to 12 centimètres long, should be lubricated and passed down the urethra, and that the injection should be made by adapting the nozzle of an ordinary syringe to the end of the tube. The meatus is to be left free, so that the injection may return freely between the tube and the urethral walls.

2648. *Yeo on a Case of Pyrexial Syphilis.*—This case, of which an account was given by Dr. Burney Yeo before the Clinical Society (*Lancet*, Feb. 16, 1884) was admitted into King's College Hospital on Oct. 10, 1883, with symptoms of pyrexia. The temperature was high, with great diurnal fluctuations, twice reaching 105° F., and four times 104° F., and averaging in the evening for three weeks from 103° F. to 104° F. The daily oscillations were often more than 6° F. The other symptoms were pains in the limbs and trunk, headache, thirst, sleeplessness, great debility, and rapid emaciation. Between a fortnight and three weeks after admission, spots resembling imperfectly developed variolous pustules, without the areola, appeared, chiefly on the back and legs. There was considerable doubt as to the nature of the case, until the patient stated that he had venereal sores on the penis. Under antisyphilitic treatment the temperature fell rapidly to normal, nutrition and strength improved, and the eruption rapidly dried up. The patient left the hospital on Dec. 20, free from symptoms of any kind. It was supposed that the pyrexia had come on within from twenty-five to thirty days after contagion; but, as there had been other opportunities of contracting disease, this point could not be definitely ascertained. The patient's blood was examined by Mr. Watson Cheyne, but no micro-organisms were found.

2650. *Derignac and Moussous on Gonorrhœal Endocarditis.*—This case was that of a man, aged 25, who was under the care of M. Derignac (*Gaz. Méd. de Paris*, No. 7, 1884). The history was that three weeks after the appearance of a first attack of gonorrhœa, the patient had been seized with violent pain in the left shoulder, which soon shifted to the right shoulder and there remained. One week later, the patient was admitted into hospital. He had never before suffered from pain in the joints, and there was no family history of rheumatism. He had never had scarlatina or typhoid fever, and there was no sign of syphilis, alcoholism, or chorea. On examination (November 19) the right shoulder-joint was found to be painful and slightly swollen. All the other joints appeared to be healthy. There was a urethral discharge. The heart-sounds were normal. For a fortnight the shoulder remained in about the same state, and every evening there was slight fever, but the temperature never rose above 38°·5 C. (101°·3 F.). The discharge also continued, but was much less in quantity. Salicylate of soda (dose, and frequency of administration not mentioned) had failed to give relief. On December 5 there was a sudden rise of temperature to 39°·2 C. (102°·6 F.) with signs of embarrassment of the heart's action. On auscultation there was a well-marked systolic bruit, heard best at the apex and conducted towards the axilla. The sound was not modified by respiration or by change of position. The fever subsided in a few days; but two months later the bruit remained, and was even a little louder than before. There were also signs of hypertrophy of the left ventricle, the apex-beat being in the seventh intercostal space. The arthritis still persisted, and the deltoid and brachial muscles had become slightly atrophied.

2651. *Detmold on the Diagnosis and Treatment of Syphilis.*—In this paper (*Boston Med. and Surg. Jour.*, Feb. 28, 1884) Dr. Detmold advocates the treatment of syphilis by the application of solution of perchloride of mercury to the skin. One grain of perchloride is dissolved in half an ounce of water,

and the solution is rubbed on the skin night and morning, each of the extremities being rubbed in turn. Dr. Detmold states that he has found this mode of treatment most successful; that it never produces salivation, has no local effect on the skin, and is efficient. Occasionally it produces griping pains after being continued for some time.

ARTHUR COOPER.

2652. *Ignatieff on Syphilitic Ulcers of the Intestine in Children.*—The author has observed (*St. Petersburg Medic. Wochensch.*) the case of a child who died of congenital syphilis twenty-nine days after birth. The spleen was enlarged and hard; numerous circular ulcers with sharply cut borders and sloughy surface were found in the ileum, which was narrowed by scars in other places. The submucous tissue was thickened, and the blood-vessels presented the characteristic lesions caused by syphilis.

J. S. KAESER, M.D.

2653. *Triqueros on the Treatment of Syphilis by Bichromate of Potash.*—Triqueros reports four cases treated successfully with bichromate of potash (*El Siglo Medico*, March 9). He thinks the daily dose of three centigrammes of bichromate, as prescribed by Dr. Güntz, too small, since, though toxic and corrosive in large quantities, it certainly in medium doses acts as an alterative and tonic. He was able to increase the dose without difficulty to ten centigrammes, taken at three times in twenty-four hours, dissolved in 600 grammes of water.

G. D'ARCY ADAMS, M.D.

2654. *Hutchinson on a Case of Syphilis in which the Fingers of one Hand became Cold and Livid: Suspected Arteritis.*—Mr. Jonathan Hutchinson, in the *Med. Times and Gazette*, March 1884, p. 347, narrates a case which was under his care twenty years ago, almost unique in his experience, and regarding which until lately the author has been unable to make a diagnosis. Mr. C., aged about 30, contracted syphilis about four years previously. He had taken mercury, but never to full salivation. When he was first seen by the author, there were large patches of superficial ulceration on the thighs, and slight tubercular deposit in the apex of the left lung, with loss of flesh and hæmoptysis. He was advised to spend a few months at different bathing-places, to live well and regularly, and to take a mixture consisting of ten grains of iodide of potassium, a drachm of the solution of bichloride of mercury, and a drachm of sal volatile, in one dose, three times a day. In three months he made great progress in his general health, but began to complain of constant aching in the middle finger of the left hand; during the next two months the pain grew worse, and the other fingers were involved. At the end of six months, Mr. Hutchinson again saw the patient; the hand then presented a peculiar condition. The fingers were blue and mottled, as if they had been exposed to great cold, this condition being most marked at their ends, and diminishing gradually towards the knuckles. The middle finger, which had been first affected, was now almost well, and the thumb had never suffered much. The ends of the fingers felt very cold, and their temperature averaged about 76°, whilst those of the right hand were 86°. After another interval of six months the patient was again seen; the temperature of the fingers was now the same on both hands, but the affected fingers were much thinner than those of the other hand. Since this case, the author has seen several cases favouring the belief that there was arteritis beginning in the small peripheral vessels, and travelling to the larger trunks. Mr. Pearce Gould a few months ago brought a case before the Clinical Society, which was possibly a parallel to that of Mr. Hutchinson, but much more severe. In it, progressive occlusion of the brachial artery (travelling upwards) was proved, and most of the finger tips at length sloughed.

2655. *M'Vail on the Treatment of Gonorrhœa by Open Wire Bougies.*—Dr. D. C. M'Vail, in the *Brit. Med. Jour.*, March 1884, p. 506, describes a method of treating gonorrhœa by means of open wire bougies. Woodcuts are given; first, of an instrument by which injections are made to reach the entire mucous surface of the urethra, where they are absorbed; and, second, of an open wire arrangement, to be constantly worn by the patient, so that the discharge may drain freely away. These instruments are well borne in the urethra, and the patient pursues his ordinary avocations while wearing the second form. Mr. Hilliard, of Renfield Street, Glasgow, supplies the instruments.

RICHARD NEALE, M.D.

OPHTHALMOLOGY.

RECENT PAPERS.

2656. ROSENBACH, P.—On a Case of Hemianopsia. (*Vestnik Klin. ee Sudeb. Psychiatriee*, 1883, Vol. i., pp. 115–24.)

2657. DARIER.—The Use of Electricity in the Diagnosis and Prognosis of Diseases of the Optic Nerve. (*Progrès Méd.*, No. 6, 1884.)

2658. HUTCHINSON.—Tobacco-Amaurosis. (*Med. Times and Gazette*, Jan. 1884, p. 40.)

2659. PESCHEL.—An Apparatus for Applying a Continuous Bath to the Eye. (*Centralbl. für die Ges. Thérap.*, Sept., 1883.)

2660. BETZ.—Spasmus Nictitans. (*Centralbl. für die Ges. Thérap.*, March 1884.)

2661. STELLWAG VON CARION.—The Treatment of Trichiasis and Distichiasis. (*Allegem. Wien. Med. Zeitung*, Dec. 4, 1883.)

2662. BLANCH, AGUILAR.—The Antiseptic Douche in Suppuration of the Cornea. (*Cronica Medica*, and *Rev. de Ciencias Medicas*, Jan. 25, 1884.)

2663. DEL TORO.—Acute Dacryocystitis from Jequirity. (*Cronica de Especialidades Medico-Quirurgicas*, and *Rev. de Ciencias Medicas*, Jan. 10, 1884.)

ART. 2656. *Rosenbach on a Case of Hemianopsia.* In the *Vestnik Klin. ee Sudeb. Psychiatriee*, 1883, Vol. i., p. 115, Dr. P. Rosenbach describes a case of this kind, which he happened to observe at Professor T. P. Mierzejewski's psychiatric clinic in St. Petersburg. The patient, a woman, 34 years of age, suffered from right hemiplegia, bilateral *right* hemianopsia (that is, loss of function of the left half of each of the retinæ), epileptical and epileptoid convulsions, amnetic aphasia ('my fingers cannot see anything to-day,' 'I live at the corner of Garden Street and September,' &c.), temporary disturbance of equilibrium (tendency to fall on the right side), giddiness, impairment of memory and intelligence. By the end of six months since her admission, the patient died in an epileptic fit, after she had for a fortnight presented various symptoms of pressure on the brain. At the necropsy, there were found softening of the corpus striatum, of the internal capsule,

and the external part of the optic thalamus on the left side; globo-fuso-cellular sarcomata, varying in size from a pea to a walnut in the posterior parts of both thalami, in the left cerebral crus and in the left half of the anterior perforated substance; grey degeneration and atrophy of the *left* optic tract, continuing to the posterior border of the chiasma; attenuation of the right optic nerve. The author does not doubt that the defect of the homonymous parts of both visual fields was caused by degeneration of the left optic tract. He regards his case as a positive proof in favour of the partial decussation of the optic nerves in the chiasma, and against the theory of a total decussation which lately found a new advocate in Dr. Dickinson (*The Alienist and Neurologist*, 1881). Dr. Rosenbach could find in literature only seven other instances where the necropsy revealed lesion of the opposite optic tract in subjects with bilateral homonymous hemianopsia. These cases were published by Dr. Gowers (*Centralbl. für die Med. Wiss.*, 1878, No. 31), Hjort (Zehender's *Klin. Monatsbl. für Augenheilk.*, 1867), Marchand (*Arch. für Ophthalm.*, Vol. xxviii., Fasc. 2, and the LONDON MEDICAL RECORD, 1883, June, p. 246), Dr. Dreschfeld (*Brain*, 1882, January, p. 543), Dr. Hirschberg (Virchow's *Archiv*, Vol. lxv.), and Mohr (*Archiv für Ophthalm.*, Vol. xxv., Fasc. 1).

2657. *Darier on the Use of Electricity in the Diagnosis and Prognosis of Diseases of the Optic Nerve.*—The intensity of the current necessary to produce a luminous impression in a normal eye varies much in different individuals; but M. Darier has observed (*Progrès Méd.*, No. 6, 1884) that, when a first impression has once been produced, a second flash of light (secondary reaction) can easily be made to appear in healthy people by the application of a weak current of nearly constant intensity—viz., one-tenth of a milli-ampère. In inflammation and degeneration of the retina or optic nerve, the secondary reaction is diminished or abolished; in the form of amblyopia caused by toxic substances, it remains normal, though the ophthalmoscopic appearances are very much like those of incipient atrophy. As long as the secondary reaction is not diminished, the prognosis of congestion of the papilla is favourable. The secondary reaction is therefore of importance in many cases as well for the prognosis as for the diagnosis.

J. S. KAESER, M.D.

2658. *Hutchinson on Tobacco-Amaurosis.*—Mr. J. Hutchinson, in the *Med. Times and Gazette*, Jan. 1884, p. 40, relates the case of a medical man who suffered from amaurosis, from excessive smoking. After trying several remedies, the patient found that by taking large doses of opium vision was restored almost perfectly. Mr. Hutchinson inclines to the belief that the case was an instance of one drug counteracting the ill influence of the other. The opium perhaps relaxed the set of blood-vessels which the tobacco had thrown into spasm. [To those interested in the question as to the influence of tobacco in causing amaurosis and other troubles, a reference to sect. 380 : 1, *Medical Digest*, will convey valuable information.—*Rep.*]

RICHARD NEALE, M.D.

2659. *Peschel on a Continuous Eye-Douche.*—The *Centralbl. für die Ges. Therap.* of Sept. 1883 describes an apparatus devised by Dr. Peschel, of Turin, for applying a continuous bath to the eye. It consists of a mask fitting closely over the face and nose below the eyes, by means of flexible metal bands and India-rubber bags, being at the same time open to the forehead, so that one or both eyes may be continually under the influence of the water. The object to be attained is the removal of all sources of infection, and the thorough cleansing of the conjunctival folds, while the antiseptic fluid in the bath can find its way into the tissue in trachoma and corneal ulcers, and act in a way possible to no other form of medication. A 1 per cent. solution of corrosive sublimate may be used.

2660. *Betz on Spasmus Nictitans.*—The *Centralbl. für die Ges. Therap.*, March 1884, relates a case of spasmus nictitans treated by Dr. F. Betz with good results. The patient was a boy, aged 14, perfectly healthy in appearance, with very thick hair and peculiarly abundant eyelashes. Dr. Betz removed the eyelashes along a tract 1 millimètre broad, and the spasms ceased on the second day. The eyelids were also opened much more widely after the operation, as if weariness had before caused a certain amount of ptosis, from partial paralysis of the levator palpebræ.

2661. *Stellwag von Carion on the Treatment of Trichiasis and Distichiasis.*—The *Allgemein. Wien. Med. Zeitung* of Dec. 4 contains an article by Prof. Stellwag von Carion on a new operation for the cure of trichiasis and distichiasis. This consists in removing a flap, containing the eyelashes, from the edge of the eyelid, and transplanting it, turned round the other way, on to the margin of the wound. All the hair-bulbs must be removed from the denuded surface, to ensure that no hairs spring again in the old situations. The cases which had been so treated had all done well up to the time of writing.

ALICE KER, M.D.

2662. *Blanch on the Antiseptic Douche in Suppuration of the Cornea.*—Carbolic acid in solution (1 in 100), in experimental septicæmia, is found to be incapable of arresting the process of putrefaction, but it retards its development. Under its influence, the pus-corpuscles are transformed into groups of granules, which quickly dissolve. Dr. Aguilar Blanch cites the case (*Cronica Medica*) of a child aged 3, with a central abscess of the left cornea, with perforation of the anterior chamber and consecutive hypopyon. The pus was evacuated, and the child recovered in a few days. After a time there was a recrudescence of the disease, pus again appearing in the anterior chamber. Leeches and antiseptic bandages were prescribed, with the carbolic douche; in twenty-four hours the pus had disappeared. Pasteur has shown that carbolic acid has no true parasiticide property, while sulphate of copper kills the microzoon wherever it is found. A stronger solution than 0·25 per cent. cannot be borne by the eye, but with this solution the results of treatment are very satisfactory. In support of this treatment by sulphate of copper spray, Blanch cites three cases, one being a patient on whom he had operated for cataract, and in whom, seven days after, symptoms of panophthalmitis showed themselves. These symptoms were corrected by leeches, mercurials, and carbolic douche; but, seeing that after some days an exudation pellicle still persisted at the edges of the wound in the cornea, he changed the carbolic douche for sulphate of copper. Four applications were sufficient to modify the ulcerated surface, after which the carbolic solution was resumed. The

second case was that of a young man, aged 30, with a phagedænic ulcer in the upper internal segment of the right cornea, with points of keratocele, hypopyon, with papillary exudation, iridochoroiditis, &c. As this did not yield to the means employed, though the pain ceased with the carbolic douche, the copper douche was substituted with great benefit. Two applications were sufficient, and then the carbolic solution was resumed. The third case was that of a woman, aged 46, with acute granular ophthalmia, and an encysted abscess of the left cornea. The disease resisting ordinary treatment, and the ulcer showing no signs of healing, two douches of sulphate of copper were used, with the effect of causing the ulcer to disappear in three days; the ulcerated surface cicatrised in a very short time after.

2663. *Del Toro on Acute Dacryocystitis from Jequirity.*—Dr. Del Toro, in the *Cronica de Especialidades Medico-Quirurgicas*, describes two cases of acute dacryocystitis occurring during the action of jequirity in two girls, 8 and 19 years of age respectively; the inflammation of the sac appeared on one side only in each of them, but with much greater intensity in the younger. These cases, which may be added to those observed by Simi, tend to prove that there is a propensity to dacryocystitis with jequirity. In fifty cases in which Simi used it in the treatment of granulations, he had nine cases of dacryocystitis, and Dr. Del Toro in nine cases met with it twice.

G. D'ARCY ADAMS, M.D.

REVIEWS.

ARTICLE 2664.

Annuaire de Thérapeutique, de Matière Médicale, de Pharmacie et d'Hygiène, pour 1884; *contenant le Résumé des Travaux Thérapeutiques et Hygiéniques publiés en* 1883, *et les Formules des Médicaments Nouveaux.* Par A. BOUCHARDAT, Professeur d'Hygiène à la Faculté de Médecine de Paris, et par J. BOUCHARDAT, Médecin-Major. 44e année. Paris: Félix Alcan. 1884.

WE have much pleasure in recording the appearance of another number of this useful and interesting annual. It is always worth reading, and has the advantage of being not only instructive but amusing. One of the first articles in the book is devoted to Dr. Dujardin-Beaumetz's case of aconitia poisoning. It seems to have been an accidental occurrence, but at the same time it is strange that any medical man acquainted with the properties and physiological action of this powerful alkaloid should have deliberately and intentionally taken from fifty to sixty drops of a two per cent. solution. Little or nothing seems to have been done in the way of treatment; and this is especially remarkable, as death ensued only six hours after the ingestion of the poison. Atropia and digitalis are surely recognised antidotes, and yet no mention is made of their employment. It is to be regretted, too, that it is not stated whose aconitia it was that was taken. The word aconitia, if unqualified, means little or nothing, for our English aconitia is at least seventeen times as strong as the German, the French being intermediate in activity. The case, however, is of considerable interest, although it is imperfectly reported. An abstract is given of Landowski's article on piscidia erythrina, but it contains nothing new or original, and is not worth reproducing. Two formulæ are given for the administration of nitroglycerine, but they are both open to objection, and are not to be compared for one moment to our 1 per cent. alcoholic solution, which answers every purpose admirably. Three articles are devoted to abrus precatorius, a subject which has of late attracted considerable attention. Dr. Wolfenden's paper on white agaric in the treatment of night-sweating is reproduced, but somewhat late in the day, for, if we mistake not, it appeared as long ago as October 1881. The amusing part of the book is the spelling. If Dr. Bouchardat has to mention the name of an author half a dozen times, he invents as many different modes of spelling it. It seems to be a point of honour with him never to spell it twice in the same way. For example, on p. 72, the distinguished professor of Institutes of Medicine at Edinburgh is called Rutherford, whilst a few lines further on his name is spelt 'Rhuterford.' Again, on p. 10, we are told about 'MM. Davis et Pareke,' whilst in the index they are referred to as 'Parke et Davis.' It is perhaps not a matter of much importance, but it seems just as easy to spell 'Norris' with a capital N as with a B. The book is full of faults and mistakes of all kinds; but still for all that it is a capital little work, and we should be sorry to miss it.

WILLIAM MURRELL, M.D.

ARTICLE 2665.

Ueber Pyurie (Eiterharnen) und ihre Behandlung Von Dr. R. ULTZMANN. Pp. 60. Wien: Urban & Schwarzenberg, 1883.

IN this pamphlet, which includes two numbers of the *Wiener Klinik*, are considered the nature and treatment of the various morbid conditions which may give rise to the presence of pus in the urine. The work opens with a description of pus as it appears in the urine, and of the different appearances of pus-corpuscles under the microscope, according to the state of the urine in which they are found. Directions for the chemical examination of turbid urine, and for determining the exact cause of such turbidity, are next given. After pointing out that pus in the urine may come from two different sources—viz., from the mucous membrane of some part of the urinary tract, or from abscess, either of the urinary organs themselves, or opening into them from neighbouring parts—Dr. Ultzmann goes on to deal with the subject of pyuria under four heads, according as the pus proceeds from (1) the urethra in front of the compressor urethræ muscle; (2) the membranous and prostatic portions of the urethra (neck of the bladder); (3) the bladder itself; (4) the pelvis or substance of the kidney. The numerous lesions in these four situations which may cause pyuria are then dealt with, and the means by which one affection may be distinguished from another, both by clinical signs and by examination of the urine, are pointed out. Drawings of the microscopic appearance of the deposits are also given.

The last section is devoted to the treatment of the affections described in the preceding pages. In the treatment of gonorrhœa the author not only looks upon internal remedies as of little or no value, but states that gonorrhœal arthritis is much more frequent in cases where large doses of copaiba have been given than in those treated by local applications

alone. Thus Dr. Ultzmann advises the use of injections from the beginning; in very acute cases, of cold water, or a very weak solution of carbolic acid, to begin with; but when the urethra is not very sensitive, mild astringents—(*e.g.* alum, 5 grains; sulphate of zinc, 5 grains; carbolic acid, 5 grains; water, 6 ounces) may be used at once. Injections containing insoluble substances are condemned; in the author's opinion, such materials sometimes plug the ducts of the urethral glands, and thus follicular abscess may be caused. The author does not express any opinion as to the parasitic nature of the disease, but merely remarks that, if gonorrhœa should be proved to depend on the presence of a micro-organism, the disease might possibly be cut short by the use of some parasiticide. For washing out the bladder in chronic cystitis, the use of a syringe and soft catheter is recommended in preference to either a double-current catheter or simple irrigation by means of tubing, the mucous deposit being much more effectually dislodged by the former plan, as each time the syringe is emptied the sediment is stirred up, and consequently more easily evacuated. Passing on to affections of the kidney, causing pyuria, the question of operative treatment is dismissed in a few lines with the remark that the success of such operations has hitherto been but small in comparison with the risk attending them.

Though there is little or nothing that can strictly be called new in this little work, the author has certainly succeeded in compressing into a small space much valuable information that has hitherto had to be searched for in a much wider field; while the systematic and practical arrangement of its contents will commend it to the student as well as to the practitioner of medicine. ARTHUR COOPER.

ARTICLE 2666.

Dictionnaire Annuel des Progrès des Sciences et Institutions Médicales. Par M. P. GARNIER. Dix-neuvième année, 1883. Paris: Alcan. 1884.

THIS useful publication has now reached its nineteenth year, and may therefore be regarded as having a considerable amount of vitality; for in periodical literature, as in human life, the mortality is greatest in infancy and declines as age advances. An examination of the book does not disappoint the expectations raised by its antecedents. With the exception of a few omissions, the progress made in the various departments is fairly exhibited. One cannot be sure in all cases that the progress is progress—that it is not merely the semblance of an advance. We may, however, in these days of active and intelligent research, rest assured that erroneous doctrines perish quickly, and that the imaginary facts of emotional observers will not secure the apotheosis of their discoverers. And at present it may be an open question whether the cure of corns by means of salicylic acid may not be of more sterling value to suffering humanity than the hypothesis that a micrococcus is the cause of pernicious anæmia, or than the doctrine that the tubercle-bacillus is communicated by coitus rather than by the breath—all three statements being portions of the 'progress' of the year. It would be out of place in this journal to notice the subjects in detail, inasmuch as they have been, perhaps in every instance, already presented in these pages. The arrangement is alphabetical, and numerous cross-references enable one to find out readily what the book contains. The style, as a rule, is clear, concise, and readable; and the process of condensation appears to have been conscientiously performed. In regard to omissions, we may remark that no mention is made of cholera, and that work done in Italy has not received its due share of attention.

WILLIAM R. HUGGARD, M.D.

ARTICLE 2667.

An Experimental Inquiry into the Causes of the Variations of Pulse-wave Velocity and Duration of the Cardio-aortic or Pre-sphygmic Interval Observed in Man, &c. By A. T. KEYT, M.D., Cincinnati, Ohio. Reprinted from the Journal of the American Medical Association. Chicago. A. G. Newell, Printer, 1883.

THESE experiments have been performed partly by the aid of a schema, partly on the human subject under normal or pathological conditions. The graphic apparatus is of the author's own invention, and differs from Marey's; the tracings were photographed on wood, the glass slips being used as negatives, and the engraver followed accurately the lines as photographed. The paper is abundantly illustrated by woodcuts of tracings.

The following conclusions are drawn from the experiments with the schema. 1. The velocity of liquid waves along the interior of elastic tubes is proportional, directly to the stiffness, inversely to the elasticity of the tube traversed. 2. It is not sensibly modified by the mode of impulsion, a quick wave and a slow wave being transmitted along the same tube in equal times. 3. It is proportional inversely to the largeness of the tube. 4. It is not sensibly modified by different distances from the pump. 5. It increases with increase of pressure of the liquid in very soft yielding tubes, but, in all other elastic tubes, it shows no modification. 6. It is not modified by rapidity of current through the tubes. 7. It is not modified by branches connected with the main tube. 8. It is not modified by liquids of different consistence. 9. The distal wave is notably delayed by obstruction of the tube, although its velocity of propagation is not appreciably diminished thereby. 10. The distal wave is delayed by communication with an elastic pouch more easily distensible than the tube; while if the pouch and tube be nearly equally distensible there is no delay; yet the velocity of the distal wave is not perceptibly diminished from this cause. Hence, 11. The increased delay of the distal wave in arterial obstruction and distensible pouch, arises from arrest at the site of obstruction and site of yielding pouch.

The next set of conclusions are from a series of experiments on man. 1. The velocity of the pulse-wave is determined above all by inherent states of arterial elasticity, being slower as the arteries are more elastic. 2. It is incessantly changing, within small limits, in consequence of variation of arterial tone; being faster as the tone is higher. 3. It diminishes with the size of the artery traversed. 4. It tends to increase with increase of arterial pressure, but modification from variation of pressure often fails to manifest (itself). 5. It is not perceptibly modified below the site of an arterial obstruction, but the distal wave is delayed more in consequence

of check at the site of obstruction. 6. It is not perceptibly modified in an artery below the site of an aneurism, although the distal wave may be delayed there in consequence of absorption by the yielding aneurismal walls.

The following conclusions on the presphygmic interval or period of delay between the ventricular contraction and the wave in the aorta, due to the resistance offered by the aortic valves, are also from observations made on man. 1. The duration of the presphygmic interval is *increased* in (by) slow ventricular contraction, unfrequent pulsations, relatively high arterial pressure, heavy aortic valves, mitral insufficiency, and probably mitral contraction. 2. The duration of the presphygmic interval is diminished in quick ventricular contraction, frequent pulsations, relatively low arterial pressure, and aortic insufficiency. ROBERT SAUNDBY, M.D.

NEW INVENTIONS.

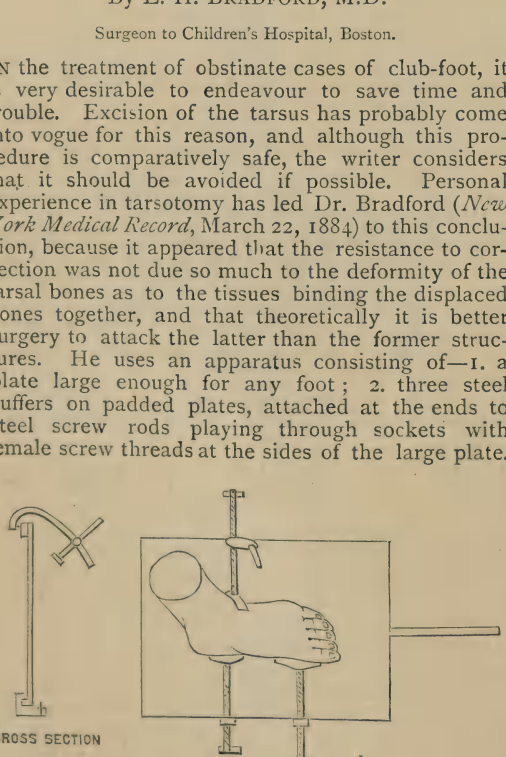
ARTICLE 2668.

ON THE USE OF FORCE IN THE TREATMENT OF RESISTANT CLUB-FOOT.

By E. H. BRADFORD, M.D.

Surgeon to Children's Hospital, Boston.

IN the treatment of obstinate cases of club-foot, it is very desirable to endeavour to save time and trouble. Excision of the tarsus has probably come into vogue for this reason, and although this procedure is comparatively safe, the writer considers that it should be avoided if possible. Personal experience in tarsotomy has led Dr. Bradford (*New York Medical Record*, March 22, 1884) to this conclusion, because it appeared that the resistance to correction was not due so much to the deformity of the tarsal bones as to the tissues binding the displaced bones together, and that theoretically it is better surgery to attack the latter than the former structures. He uses an apparatus consisting of—1. a plate large enough for any foot; 2. three steel buffers on padded plates, attached at the ends to steel screw rods playing through sockets with female screw threads at the sides of the large plate.



By turning the screws the buffers are pushed forwards, and press (1) upon the side of the first metatarsal bone; (2) on the side of the os calcis, just beneath the inner malleolus; (3) on the outer side of the foot over the projecting head of the astragalus. The female screw is adjustable upon an arm, curved so that pressure can be applied when it may be found necessary. The sockets and arms are arranged so that they can be shifted from side to side. The appliance can thus be used for either foot. 3. A straight rod, extended in the plane of the plate, gives increased power in raising the front of the foot.

This apparatus is only intended for obstinate cases, and is to be applied after the ordinary tenotomy operations, and some manipulation has been made use of. An anæsthetic will be needed when the pressure is applied, and this pressure is to be kept up for a few minutes and sufficient force used to correct, or in severe cases nearly correct, the deformity. The limb is then to be encased in a plaster of Paris bandage which can be left on for from ten days to three weeks.

It is not alleged that equally good results cannot be obtained by other more gradual methods. The writer, however, believes the method to be safe, to save time and trouble, and to give perfect results.

NOBLE SMITH.

MISCELLANY.

The 'POSTAL MICROSCOPICAL SOCIETY,' of which Dr. C. P. Coombs, of Castle Cary, is the president, has, since its commencement twelve years ago up to the present time, put in circulation chiefly such slides and notes accompanying them as are adapted to general interest; special pathological and histological slides and notes have not hitherto been circulated continuously. It is now proposed to add a Special Medical Branch, which all members of the profession whose names appear in the *Medical Directory* are invited to join. The entrance fee is 5*s.* and the annual subscription 10*s.* per annum, for which each member receives at about fortnightly intervals a box containing twelve slides accompanied by a note-book; also one copy of the *Journal of Microscopy* quarterly. The medical slides and notes will be kept distinct from those of the society in general, and form a separate circulation. Mr. Alfred Allen, 1 Cambridge Place, Bath, is the honorary secretary, and will be happy to send a copy of the rules and to give any further information.

DR. SAMUEL D. GROSS, for many years Professor of Surgery in Jefferson College, Philadelphia, has recently died at an advanced age. He was long known as one of the most eminent surgeons in the world, and was equally venerated on account of his sterling character. His *System of Surgery* has for many years been a standard work; he was also the author of *Elements of Pathological Anatomy*, a *Manual of Military Surgery*, a book on *Wounds of the Intestines*, and several other works.

THE GERMAN MEDICAL CONGRESS was held in Berlin last month, under the presidency of Professor von Frerichs; and the Surgical Congress met for the thirteenth time in the same city on April 16 to 19, Baron von Langenbeck being again chosen president.

THE twenty-fifth anniversary of Dr. von Frerichs's appointment to a professorship in the University of Berlin was celebrated during the meeting of the Medical Congress in that city. The rank of Baron has been conferred on Dr. von Frerichs by His Majesty the Emperor of Germany.

THE tercentenary of the University of Edinburgh was celebrated in April. The proceedings commenced on the 15th, and lasted four days. The honorary degree of LL.D. was conferred on (among others) a large number of eminent British and foreign members of the medical profession.

The London Medical Record.

Article 2669.

ZASETZKY ON ANTIFEBRILE TREATMENT.

In a valuable paper in the *Vratch*, No. 11, 1884, p. 185, Dr. N. A. Zasetzky, of Professor V. A. Manassein's clinic, considers the questions of food and drink, air, and rest, for the febrile.

The author unconditionally repudiates the old doctrine of keeping the patients on a 'hungry' diet, consisting of carbohydrates, and insists on the necessity of their sufficient feeding. Albuminates, fats, and carbohydrates must be represented in the food for the febrile exactly in the same proportion as in the food for the healthy. He supports this demand by the results of observations of his own (*Vratch*, May 27, 1882; and *Inaugural Dissertation*, 1883, St. Petersburg), of Hösslin (Virchow's *Archiv*, Vol. 89, 1882), and V. E. Tchernoff (the London Medical Record, Dec. 1883, p. 49); according to which febrile patients assimilate albuminates, fats, and carbohydrates, in the same degree as healthy subjects. Food must be given to the febrile in comparatively small amounts at a time; it must be mechanically prepared for digestion (that is, diluted, cut in small pieces, &c.), and must well satisfy individual tastes and habits of the patients. The febrile must be allowed to drink freely and to choose for drinking what they like (water, *kvas*, wine-and-water, tea, coffee, milk, toast-water, syrup and water, or fruit-juice in water). The temperature of the drink must vary according to the patient's state (that is, when fever is high, the drink must be cold; otherwise, the patient may drink what he likes at the ordinary temperature).

As regards the temperature of the air in which the patient breathes, the author, supporting his view by the experiments of Hahn, Rosenthal, Senator, L. R. Traubenberg (the London Medical Record, 1884, May, p. 188), P. Niemeyer, Oertel, Ivan Sokoloff, and Liebermeister, comes to the conclusion that it must oscillate between 11° and 14° R. (56°·75 and 63°·5 F.), not exceeding the latter limit. The necessity of most carefully maintaining the purity of the air in the patient's room (by means of free ventilation) is placed by the author on a level with the necessity of good feeding. And well he may do so; since, having repeated the interesting experiments of Mr. E. A. Cook on the influence of a close atmosphere in the excretion of urea and uric acid (see the *Brit. Med. Jour.*, May 5, 1883, p. 857), the author found not only a striking increase (from 20 to 30 per cent.) in the nitrogenous metamorphosis, but also the appearance of a considerable febrile state in previously healthy persons.

These experiments were conducted on four subjects, who were kept in an unventilated room, having 55 cubic metres of capacity, during two days. On their leaving the close atmosphere after forty-eight hours' absolute confinement, or, in some cases, even during their imprisonment, there appeared a febrile state, reaching above 38° and even above 39° C., and lasting from half a day to two days.

Passing to the last, but not the least, point of his article, the author substantiates his demand for the greatest possible amount of rest for the febrile. Having pointed out the well-known data referring to the influence of muscular work on various systemic functions (Ranke, P. Bert, Speck, K. Vierordt, Dranitzyn, Leube, De la Celle de Chateaubourg, Korkunoff, Mayerhausen, Liebermeister, &c.), the author mentions, also, his own experiments on the healthy, tending to prove that moving about leads to an increase of from 4 to 18 per cent. in the excretion of nitrogen in urine (comparatively with a complete rest of the body); most probably, the influence of movement on nitrogenous metamorphosis in the febrile subjects must be still more powerful.

V. Idelson, M.D.

Article 2670.

BRUNTON ON THE ACTION AND USE OF DIURETICS.

Dr. Lauder Brunton, in the *Practitioner*, April 1884, p. 274, and May, p. 353, contributes an able article on the action and use of diuretics. Not only does water form 59 per cent. of the weight of the body, but the life of all the tissues is essentially dependent on its presence. Diminution of water, however, may be endured by the tissues without injury; but diminution will diminish tissue-change, while increase of water will augment it. When much water is drunk, the tissue-change is increased to such an extent that the body must rapidly waste: a ravenous appetite is produced, which causes loss of body-weight if not gratified. Some of the water finds its way out of the body through the lungs and bowels, but the greater part passes through the skin and kidneys. Probably the skin excretes about two-thirds of the quantity eliminated by the kidneys. In cold weather the skin does not act, and the kidneys have more work to do; but in warm weather the skin acts freely, and the immense loss of heat occasioned by the evaporation of the perspiration is so great, that in negroes it has been noticed that the skin, while perspiring profusely, is as cold as marble. The skin cooled by perspiration acts as a refrigerating apparatus to the blood, and prevents the temperature of the body from rising too high. The skin, however, does not carry off the solids in solution, the greater part of this work being thrown upon the kidney, which has a threefold function: 1, that of excretion of waste products; 2, a provision for the removal of excessive water; 3, an arrangement for the retention of water in the body by its reabsorption after it has washed out the waste products. On looking at the kidney three structures seem to be connected with these three functions; viz. 1, convoluted tubules with epithelial cells, which in all probability are the chief structures for excreting waste products; 2, the Malpighian corpuscles, for excreting water along with some solids; and 3, usually one or more constrictions in the tubule, which may serve the purpose of preventing too rapid exit of the water, and thus allow time for its reabsorption in cases where its retention is desirable. A diagram is given, showing the form of the urinary tubules in different classes of animals, as well as others demonstrating the vascular supply of the kidney in the newt and in a mammalian kidney.

The rapidity of the secretion of urine depends on two factors; 1. arterial pressure in the glomeruli; 2. the composition of the blood.

The pressure of blood in the glomeruli may be raised—*a.* by increase of the arterial tension generally ; *b.* by increased tension locally. The pressure of blood in the glomeruli may be diminished—1. generally ; *a.* by failure of the heart's action ; *b.* by dilatation of vessels in larger areas, as the intestines, muscles, and skin; 2. locally ; by contraction of the renal arteries, or of the afferent branches to the glomeruli.

The author then goes on to speak of the mode of action of diuretics.

A. They may act on the circulation in the kidney, raising the pressure in the glomeruli ; 1. *locally*, by contracting the efferent vessels, or the arterial twigs which pass directly to the capillary plexus ; or by causing dilatation of the renal arteries, and thus increasing the supply of blood to the kidney ; 2. *generally*, causing a rise in the blood-pressure by contracting the vessels in other parts of the body.

B. Other diuretics may act on the secreting cells of the tubules, and may increase both the amount of water and the amount of solids excreted by them.

There is more hope of doing good by using diuretics in combination than by using them singly. By combining spiritus ætheris nitrosi with digitalis, we can dilate the renal arteries while those of the other parts of the body remain contracted, and thus a much larger flow of urine is obtained than by using digitalis alone. A table is given showing the probable mode of the action of diuretics. The uses of diuretics are summed up under the three following heads :—

1. To remove the excess of fluid met with in the tissues and serous cavities in cases of dropsy ;

2. To hasten the removal of injurious waste products and pernicious substances from the blood ;

3. To dilute the urine.

The most powerful diuretic we possess is perhaps water. Many gouty persons take little or no water, except a cup of tea or coffee, and then their wine or beer. Lately, a plan of treating gout by draughts of water at intervals during the day has been a good deal employed, and is in many cases successful. A diet is laid down for gouty subjects, the principal item being frequent draughts of very hot water, taken the first thing in the morning, during the day, and the last thing at night, with abstinence from meat and wine, adhering chiefly to fish or fowl, milk puddings, greens, bread or biscuits, and fresh butter.

RICHARD NEALE, M.D.

ARTICLE 2671.

SQUIBB ON OLEIC ACID AND OTHER ACIDS OF THE UNITED STATES PHARMACOPŒIA.

IN his *Ephemeris*, November, 1883, Dr. Squibb continues his review of the *United States Pharmacopœia*, commencing with oleic acid. Since first introduced into use in medicine by Mr. John Marshall, in 1872, this acid and the oleates have held their ground as useful applications. Although, by force of advertisement rather than utility, the metallic oleates prepared by the double decomposition of an olive-oil soap and a metallic salt have of late been more in demand than those made by the combination of the metallic oxides with oleic acid, nevertheless, oleic acid is still much in use, both here and across the Atlantic, to form oleates, or, rather, oleic solutions of the alkaloids. It is known that both there as well as here there is some objection to the peculiar odour and want of perfect purity of the acid as met with in commerce. Dr. Squibb distils and purifies the common acid or 'red oil' of the candle-makers, and recommends this as being pure enough for making the oleates for external use. He objects to the U.S.P. description of the acid, and proves that such an article can only exist *in nubibus*. The specific gravity—0·800 to 0·810, is wrong ; the compilers no doubt overlooked the printer's error in Wurtz and Watts' dictionaries, in which it is given as having specific gravity 0·808 at 19° C., whereas originally in Gmelin, who quotes Chevreul, it is given as ·898 at 19° C. ; this, Dr. Squibb experimentally corroborates, is correct. That it is odourless, or nearly so, tasteless, and of a neutral reaction Dr. Squibb also denies ; no such preparation is in commerce ; it is always slightly acid, owing to the presence of traces of the oxyoleic acid. He also objects to the statement that it 'does not become semi-solid at 14° C. (57°·2 F.)—it should remain transparent as low as 4° or 5° C. ; else, as Dr. Squibb shows, a considerable excess of palmitic acid will be dissolved in it at the ordinary temperature. In England we have a comparatively pure oleic acid, much purer than the common red oil, ready to hand, obtained by first treating palm-oil with sulphuric acid and then distilling in superheated steam. One large candle manufactory (Price's) supplies it known as 'frozen acid,' *i.e.* the acid from which most of the palmitic acid has been separated by cold and pressure ; its colour is pale, between that of almond oil and pale sherry ; it has a slightly acid reaction to test-paper, and a characteristic odour. It is doubtful whether redistillation or other purification would free it from this.

Phosphoric acid, U.S.P., has specific gravity 1,347, and contains 50 per cent. of orthophosphoric acid ; it is obtained by the nitric acid oxidation of phosphorus. and is purified from arsenic by sulphuretted hydrogen. This preparation Dr. Squibb praises ; although a simpler process is now generally followed by most manufacturers—that of the direct combustion of phosphorus, combination of the phosphoric anhydride with water, and subsequent purification from arsenic. His estimate of the therapeutic value of this acid, compared with that of free phosphorus and other phosphorus compounds, is high, perhaps higher than that of most English physicians.

In his criticisms on *salicylic acid*, both Dr. Squibb and the *United States Pharmacopœia* are unable to give tests for, and explain, the mystery of the impurity of the 'artificial' acid, prepared from carbolic acid, as compared with the purity of the 'natural' acid obtained from oil of wintergreen. Dr. Squibb recommends its being administered in wafer-paper, or cachets, but not in capsules, without saying why. It dissolves about 1 in 300 of water, he says ; and he recommends this solution as a vehicle for hypodermic injections. It is questionable whether from such a solution containing in a concentrated form a very soluble salt of quinine or morphia, the salicylates of these alkaloids would not crystallise out if exposed to cold, as salicylates of the alkaloids are, as a rule, very insoluble salts.

Dr. Squibb appears to be hypercritical on *acidum sulphuricum aromaticum*. The formula consists of sulphuric acid mixed with alcohol, with tincture of ginger and oil of cinnamon added. The older preparation was made by exhausting the ginger and cinnamon with part of the alcohol, and adding the

acid mixed with the remainder. Dr. Squibb says a deposit formed in this mixture, which might be avoided by percolating a mixture of the acid with nearly all the alcohol. Made in this manner, we have found that still a quantity of deposit forms in the percolate so obtained. This preparation has been replaced by diluted sulphuric acid by modern medical men, who have overlooked the fact that some of its virtues are due to sulphovinic or ethyl-sulphuric acid, which always forms to a greater or less extent in it. Certainly time is saved in making the preparation as now directed; it can even be made extemporaneously. Why it is not so good, Dr. Squibb does not inform us.

Dr. Squibb is annoyed at the reduction of sulphurous acid in strength to nearly one-half—from 6·4 per cent. to 3·5 per cent. without any reason being given. It is to be hoped an equal reduction will be made in its strength in our next *British Pharmacopœia*; at present, a strength of 9·2 per cent. is ordered; but commercially it is generally supplied containing about 5 per cent. If it contain so much as 9·2 per cent., it can only be kept so by cold or under pressure. It is probable that, although 6·4 per cent. was indicated in the *United States Pharmacopœia*, as much of the acid met with in commerce did not contain above 3·5 per cent., the old authorised strength was reduced to the commercial strength. Still, changes in the strength of a preparation, unless urgently called for, are annoying alike to the conscientious pharmacist, prescriber, and patient, but mostly so to the patient, who only gets his medicine of one-half its proper strength.

It is much to be regretted that, in the present revision of the *British Pharmacopœia*, we have not the aid of such an indefatigable pharmaceutical worker as Dr. Squibb, in whom are combined the functions of Doctor of Medicine, scientific chemist, and pharmaceutical manufacturer.

Wm. Martindale.

Article 2672.

TUCKER ON THE LUNATIC COLONY AT GHEEL.

The lunatic colony at Gheel, Belgium, has existed as a retreat for the insane ever since the twelfth century, and probably longer. There is a central hospital, into which acute and refractory cases are received; but the great majority of the patients are boarded out with the householders of the village and neighbourhood. Gheel has often been held up as a most successful example of the boarding-out system, combined with an administrative and inspecting central body. It has been urged that the insane are there excellently cared for, with as little restriction of their liberty as is possible, and that they are for the most part usefully employed in the various occupations of every-day life. This colony originally grew up around a religious house, at which miraculous cures of insanity were believed to be worked, and in which patients are still sometimes subjected to a nine days' course of religious treatment. The central hospital is of more recent date, the present building having been erected in 1859.

Dr. Tucker, who is making a tour of inspection of European asylums, and reporting to the New South Wales Government, has recently published a pamphlet,* in which most serious accusations are made against the Gheel system generally, and against the Gheel colony in particular. Dr. Tucker's visit was made in December, whereas other visitors have usually made their observations during the summer months, *i.e.* under the most favourable conditions of weather. The following are some of the facts as related by Dr. Tucker.

The ground was saturated with water, the pools were frozen, and the cold penetrated to the very bone. From the railway station there was about a mile to walk along a narrow muddy way to the town. A carriage, engaged for the purpose of visiting the remoter tenements occupied by the lunatics, had soon to be abandoned, owing to the wretched condition of the unmade roads and streets. Ill-kept narrow streets ramify in all directions from a central square. At the time of Dr. Tucker's visit the space in the middle of the square was ankle-deep in mud; and the first object which specially attracted his attention was an old insane woman wading pensively about through the deep and cold slush. The Commune of Gheel has a population of over ten thousand souls, of whom nearly two thousand are lunatics. The population of the town of Gheel is six thousand, the rest of the inhabitants of the Commune being scattered amongst the several villages and hamlets of the territory. The whole region is low and swampy, and perfectly flat. Nothing in the nature of a hill breaks the monotony of the landscape, and even the smallest undulation of ground is wanting. The farms, so to denominate them, are of the most limited dimensions, and for the most part barely suffice to supply the modest wants of the cottagers. There is no commerce or industry of any kind, and the town is as dull and depressing as any town could possibly be. The general air of gloom and desolation is increased by the local habit of keeping the shutters of the houses constantly closed in winter to exclude the wind and rain. The leading feature of the place which first strikes the visitor is the drinking shops. These are met with at every turn and in every direction. These drinking shops, or small public-houses, are not only accessible to the lunatics, but many of the patients are quartered in them. Dr. Tucker was informed that shortly before his visit one of the patients, an Englishman, had died from excessive drinking.

Dr. Tucker found an English gentleman, a Jew, quartered in a public-house; the patient had delusions, but conversed rationally on most subjects; he had been five years at Gheel, and was at first with a butcher, whom he assisted in his business. He much disliked being quartered in a house where drink traffic was carried on. While Dr. Tucker was talking with him, two men in a state of intoxication entered the public room; this being the kind of contact to which he and other patients in the town were constantly exposed. He complained of being cut off from all religious connections, but seems to have found some amusement in attending Sunday evening dances in the town. These dances are not in connection with the hospital, but are attended by the young people of the town, and are open to all by a small payment. Only 4*l.* per month was paid for this gentleman's board and lodging, clothes being supplied by his friends. He was required to chop wood for the house, although in constant fear of cutting or hurting himself.

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* Cornish Brothers, New Street, Birmingham.

In another small public-house was a Dutch woman a bout 25 or 30 years of age, sitting in the public room, nursing a dog. She was respectably dressed, and seemed above the common. Six men were in the room drinking, as well as two other women. Three of the men and one of the women were gambling for money with cards, and there was a good deal of loud talking going on. Some of the men were engaged in conversation with the lunatic woman, and, judging by the hilarity evoked, they seemed very much amused. 'I was informed by my *valet de place* that the woman was saying things of great impropriety, especially in the presence of men. For the care bestowed upon this patient her friends (I was informed) pay 60*l.* a year to the people of the house.'

An intelligent patient complained strongly of the arbitrary power of the chief doctor, and the mercenary character of the treatment of the patients. He said he was visited occasionally by the medical director, but rarely by any other medical man; if he complained he was transferred to the hospital, and thus deprived of his chief privilege—partial liberty. The patient was an English architect, whose recreation was painting; he had no access to books or to other means of amusement.

The use of leather gloves seemed to be at the option of householders. The people of the house or cottage employ at will such mechanical restraints as they please or may deem necessary, and it rests with them how they report to the hospital, or whether they report at all. The best house visited by Dr. Tucker contained an Englishman paying 100*l.* a year, and a Polish Prince paying 48*l.* a year. Two female patients in one house were paying only 8*l.* 10*s.* a year each. In another cottage, two females paid 8*l.* a year and 4*l.* a year respectively. Patients were found secured in their chairs by wooden cross-bars. An idiot girl occupied a bed in the same room with the man and wife who had charge of her. The descriptions of most of the living and sleeping-rooms are miserable in the extreme; bedclothes were found to be dirty and covered with excrement.

Most of the cottages are of one storey, with one or two bedrooms in the roof for the patients. They are generally old and out of repair, and in some cases ready to tumble down. They materially help in giving to Gheel the aspect of a place of the past, and in imparting the impression that the town is centuries behind the times. If the boasted liberty of the patients under the Gheel system be preferable to the treatment provided in asylums and hospitals, then it would be far better to allow the insane to roam about at large as in former days, than to condemn them to live in such wretched abodes as are to be seen at Gheel. In one cottage, the patient, a young man, pays 8*l.* a year, and was in a disgusting state of dirt. He was at the moment in charge of two young women, their brother and mother being out. 'I was informed that the brother sometimes washes the patient, but that at present he is not washed, as he is not well.'

In a public-house were two female patients (inmates) taking their dinners in the general room, where four customers were smoking and drinking. The bedrooms of these women were off the common room, and the doors, secured only by a bolt on the outside, were quite under the control of the customers. The noise at night from the public room must also necessarily disturb the patients. In one cottage, a female patient complained bitterly of bad treatment and bad food, and stated in a very connected and circumstantial manner that the master of the house had repeatedly struck her and knocked her head against the bedstead. This young woman was to all appearance in fair bodily health, and her conversation seemed free from delusions. She said she was made to work all day long, but the people of the house were not content even if she worked from 5 A.M. to 10 P.M., and stopped her food if she did not work. In another public-house there were two male patients in a small kitchen about 14 feet square, with the woman of the place and eight children.

Numerous other instances are given of squalor, privation, overcrowding, and want of cleanliness; Dr. Tucker says that many, if not most, of the patients he saw looked neglected, cold, dirty, and miserable. A number of them seemed to have no object or purpose in life but that of sitting near the smoky stove (if there be one, which is not always the case) of the kitchen, with nothing to divert the mind or break the eternal monotony of their existence. Only in one house were there any books to be found, and nowhere did there seem any provision made for the intellectual or other amusement of the patients. In this, as in so many other respects, all the canons of modern treatment, agreed upon by the best authorities in lunacy, are ignored and probably unknown.

The old religious house (Ziekenkamer) is still occasionally used for the treatment of patients by the priests and sisters for nine or eighteen days at a time. The patients are fastened to iron rings in the walls during the performance of religious rites. A medical man may be present if any patient's friends desire it. This religious treatment is in no way connected with the general system of the hospital or the colony.

All really dangerous lunatics are sent out of the colony to close asylums, only the quiet patients being allowed to remain. Owing chiefly to this circumstance, very few instances of indecent assault by male patients have occurred. During fifteen years only three female patients had become pregnant; in one of these cases, a male patient was known to be the father.

The hospital is about a mile from the central square. The medical director resides there, and four medical assistants live in the town; to each of these latter a quarter of the colony is assigned, which they are expected to visit *twice a month*, and personally to inspect each patient. There are, besides, six 'inspecting attendants,' who are also instructed to visit each patient twice a month. Dr. Tucker appears to have some doubt as to the regularity with which these visits are made. He says: 'The supervision theoretically provided is insufficient and inefficient, so far as I could judge. The deplorable condition of many of the patients enforces this conclusion.' All new patients are first admitted to the hospital, but they usually remain there only from five to eight days. This is, of course, a very insufficient time for effective medical treatment, but curable and chronic cases all appear to be boarded out alike. The hospital usually contains about sixty patients; any of the boarded-out lunatics who become troublesome or obstinate are usually sent into the hospital for what is virtually a term of imprisonment, and this treatment is much disliked by most of them. Dr. Tucker says that the male attendants were rough in appearance, that the whole hospital contained little to interest or amuse the

patients, and was cold and cheerless. The pauper patients are paid for at the rate of from 8*d.* to 10*d.* daily; the private cases pay varying rates up to 240*l.* a year. There are about twenty-five English patients in the colony.

Although the Gheel system has been often described in glowing terms, it is noteworthy that it has never been imitated upon any large scale. There is a growing tendency of late to affiliate various outlying buildings to existing large asylums, and thus to form something like a colony around the parent building. This plan has many advantages; but it is above all things necessary to insure close and constant supervision by thoroughly reliable persons of all outlying buildings and their occupants. Dr. Tucker's description of the state of things at Gheel affords a loud additional warning of the paramount importance of this point. The rates paid for many of the Gheel patients are so miserably inadequate, that no luxuries could possibly be expected for the money; but whoever undertakes the care of an insane patient should at least be obliged to keep him clean, decent, sufficiently fed and clothed, and under proper sanitary conditions. This is apparently not done at Gheel. The small payments made for the patients are used to support both the patients and the people with whom they live, for there is no other industry at Gheel except the liquor traffic. Our author says that with few exceptions the patients were treated more like individuals of the brute creation, than like human beings having special claims for care and protection in their helplessness and dependency.

Much has been said of late about the inadequacy of the supervision exercised over our lunatic asylums by the Lunacy Commissioners and others; but we may at least be sure that we are far ahead of other countries in this matter, and that nothing like the state of things described by Dr. Tucker as existing at Gheel could for one year in this country escape observation, exposure, and reform.

The facts and descriptions given by Dr. Tucker of what he saw at Gheel seem fully to justify the strong words with which he concludes his paper. They are these:—'I have visited some hundreds of lunatic asylums in four out of the five geographical divisions of the globe, and in the worst of them I have seen some cheerful faces: at Gheel I did not see a single one. In a word, Gheel is an abode of desolation—a lingering survival of remote ages—a monstrosity in this nineteenth century, and a humiliating reproach to our modern civilisation.'

Charles S. W. Cobbold, M.D.

Article 2673.

LEWIN ON THE HYPOGLOSSAL NERVE IN CONNECTION WITH SYPHILITIC GLOSSOPLEGIA.

In the Berlin *Charité Reports*, Band viii., 1883, Lewin treats of the above. Amongst 50,000 cases of syphilis he found nineteen with gummatous glossitis, and three in his private practice, all these twenty-two being affected with paralysis. The histories of two patients are given in full; one suffered from hypoglossal paralysis on one side, with symptoms almost like those of bulbar paralysis, and was cured by sublimate injections. The other presented atrophy of half of the tongue, with nodes at its root; deviation of the point to the diseased side (so that it scarcely projected beyond the teeth); failure in raising it to the hard palate; difficulty in masticating, in swallowing, in speaking quickly and for long, and in phonating the letters *d*, *t*, *l*, *n*, *r*. There were also lowered and delayed taste-perception on the left side of the tongue; with lowered perception of movement, position, temperature, pain, and electric irritability; salivation, and lastly, a great paleness of that side. *Post mortem*, two gummatous foci were found in the skull; one between the dura mater and the bone to the left of the vertex, the other upon the hypoglossal nerve itself. This nerve, anterior to the condyloid foramen, and partly within it, was embedded in a greyish-white jelly-like gummatous mass. The root-paths of the nerve in the medulla oblongata were unaffected; the trunk alone was involved. A complex of veins existed about the nerve as it entered its canal, like a small cavernous tumour; this evidently arose from the venous circle normally found around the nerve there. The nucleus of origin was normal.

Lewin comments thus upon this case.

1. The *motor paresis* of the tongue was due to the paralysis of its muscles (the genio- and stylo-glossus, the longitudinal—superior and inferior—and transverse strata, and the genio-hyoid).

2. The *want of taste* is ascribed to pressure by gummata upon the peripheral ends of the glosso-pharyngeal in the circumvallate papillæ. Lewin is thus of opinion that the chorda tympani holds its gustatory fibres only from the glosso-pharyngeus (by the following route; petrosal ganglion, tympanic plexus, small superficial petrosal, otic ganglion).

3. The *salivation* is explained as a reflex act, most probably through the glosso-pharyngeal nerve.

4. The *local anæmia* was the result of compression of the lingual nerve, which, according to Vulpian, holds vaso-dilator nerves for the tongue.

5. The *stuttering or stammering* might be caused either by lessened size of the tongue, or by compression of the fibres of origin of the hypoglossal nerve by the vertebral artery (Willis, 'freno injecto circumligans'), or lastly, from pressure of the swollen circulus venosus upon the nerve at the condyloid foramen.

In the historical sketch the various views of the functions of the hypoglossal nerve, from Galen down, are given. Longet says it is only sensitive over the great cornu of the hyoid. Of late years, anatomical search has been made for any nerves which might afford sensory fibres to the hypoglossal. These are detailed thus in the anatomical section. Some authors have thought that the sensory fibres are derived from a small posterior root, provided with a ganglion, like a posterior spinal nerve. Lewin remarks that such a root does not occur in man, and also contends against the view that the superior cervical ganglion sends sensory fibres to the hypoglossus. The anatomical relations of the hypoglossal with the cervical nerves, the vagus, and the lingual nerve are fully detailed.

No satisfactory conclusions from anatomy being at hand, Dr. Lewin, with Dr. Holtzer, made experiments upon dogs with the following results.

1. The peripheral end of the hypoglossal nerve contains sensory fibres. 2. In most cases these are not derived from the lingual; but (3) arise from fibres accompanying the nerve-trunk. 4. Between the descending branch (descendens noni) and the

anastomosis with the lingual, there pass sensory fibres, some from the lingual, others from the hypoglossal. 5. Lingual nerve-fibres descend also in the descendens noni. 6. No sensory fibres pass from the cerebral end of the hypoglossal to the descending branch. 7. Sensory fibres arise in the last-mentioned, apparently from the cervical nerves. 8. Fibres from the lingual nerve (on the distal side of the descendens) run backwards along the hypoglossal to its exit from the condyloid foramen. 9. The hypoglossal itself has no sensibility from its root down. 10. Sensory nerves travel with the hypoglossal (independently of the above-mentioned fibres from nerves elsewhere, by anastomosis) immediately after its exit from the skull; either from the vagus or from the cervical region of the spinal cord. E. J. EDWARDES, M.D.

ARTICLE 2674.

BECK ON RUPTURE OF THE BLADDER.

THE following is a summary of a portion of an article on lacerations of the abdominal viscera, by Dr. B. Beck, Surgeon-General in the German Army (*Deutsche Zeitschr. für Chir.*, Band xix., Heft 485).

Rupture of the urinary bladder may be produced by external violence in many ways: by a fall on the abdomen, by a blow, by some heavy body coming down on the abdomen, by a fall from a height, the feet or lower part of the body first striking the ground, by the body of the patient striking suddenly against some resisting object, or by the pressure on the front of the abdomen of some heavy mass. The position of the body at the moment of injury co-operates with the variety of external violence in determining the seat, the form, and the extent of the rupture. The bladder is always torn at one or other of its two weakest parts, which are its anterior and posterior walls, according to the direction of the external violence acting on the contained urine. Dr. Beck deals here only with uncomplicated rupture of the bladder, and excludes the transverse wounds frequently associated with fracture of the pelvic girdle.

From the direction of the external force, the surgeon may determine with fair accuracy the seat of the rupture. For instance, in a case of laceration from a fall on the abdomen, or from a kick, or from a blow, or from a fall on to the anterior abdominal wall of some heavy body, the force acting from above and from the front on the fluid contents of the bladder, and forcing these backwards and downwards, it may be concluded that the rent exists in the posterior wall between the apex and the base of the viscus, and so is intraperitoneal. On the other hand, if the patient have fallen from a height on to the feet or buttocks, the body having been bent forwards while the force was applied from below, the urine will have been forced forwards by the pressure of the abdominal viscera from above and behind, so as to form a rent in the lower part of the anterior wall of the bladder, and, therefore, an extraperitoneal one.

With regard to certain symptoms of ruptured bladder mentioned in text-books, Dr. Beck makes the following remarks. Vomiting is not always observed in cases of rupture of the bladder, and often does not last longer than the state of shock; whilst it may occur and continue for some time in cases of simple contusion of the abdomen. Meteorismus and diffused dulness over the abdomen in cases of intraperitoneal rupture come on gradually, and in association with peritonitis; and with extraperitoneal rupture, on the other hand, dulness is not spread over much of the abdomen, but is restricted to the locality of the extravasation of blood and urine. The only characteristic symptoms of rupture of the bladder are those directly proceeding from the injury itself. These are—intense and frequently repeated desire to pass urine, and inability to do this without external aid; discharge of blood-stained urine on the introduction of a catheter; then, extreme contraction of the bladder; and, again, the painful inclination to micturate as the much-reduced vesical cavity becomes filled by freshly secreted urine. Dr. Beck points out in a foot-note that retention of urine occurs frequently in cases of rupture of the intestines or liver, and even of simple contusion of the abdomen; but that in such association it is not so intense, and that the urine drawn off by the catheter is usually normal and unmixed with blood.

When in a case of laceration of the bladder the urine is mixed with coagulated blood when first drawn off, and afterwards remains blood-stained for some days, it may be assumed that the rent is very probably an extraperitoneal one, because only from the venous plexus can such excessive bleeding take place. If, on the other hand, there be not much bleeding at first, and the urine soon regain its normal colour, the laceration very probably exists in the posterior wall of the bladder, and is intraperitoneal. Œdema of the penis and scrotum may be regarded as an indication of extraperitoneal rupture, since this condition must be due to some disturbance of the circulation in the vesico-prostatic venous plexus.

Dr. Beck states that his experience of rupture of the bladder has convinced him that death in such cases, when uncomplicated, is due, not to peritonitis, but solely to poisoning of the blood, and consequent paralysis of the heart, through absorption of decomposed urine. In intraperitoneal laceration this poisoning takes place rapidly; since, through the diffusion of the intestinal gas, the urine soon undergoes a chemical change, and the ammonia salts formed by its decomposition are at once taken up by the lymphatics and carried into the blood. In extraperitoneal rupture the effused urine, together with extravasated blood, is infiltrated in the connective tissue about the neck of the bladder, where it undergoes chemical change much less rapidly, where it cannot be rapidly absorbed, and where it is not likely to cause blood-poisoning until late in the progress of the case. The nature of the result of the injury in rupture of the bladder will depend on the quantity of urine that has been discharged from the bladder, the time it has stagnated in the abdominal cavity or the pelvic connective tissue, and the strength of the constitution, and the amount of its resistance to the injurious effects of uræmic poisoning.

The practice of retaining a catheter in the injured bladder is preferred to that of frequently introducing the instrument. The surgeon fails sometimes, in the latter practice, to pass the catheter at the right moment, and frequently repeated introduction of the instrument is apt to add much to the irritation within the bladder. The surgeon, after he has diagnosed the nature of the case and the local conditions, should, according to Dr. Beck, introduce a Nélaton's catheter, so that every drop of urine flowing into the bladder may at once be removed. Certain antiseptic precautions must, however, be taken, in order to

prevent introduction into the bladder of any agents from without that might set up a change in the condition of the urine.

Intraperitoneal rupture of the bladder should, it is held, be treated by nothing short of surgical operation. Urine, when effused into the peritoneal cavity, cannot be allowed to remain there with impunity, but will soon undergo chemical change and become a blood-poison. Before peritonitis can be established and the general system seriously be affected, the source of the great danger to life should as far as possible be removed. The abdominal cavity should be opened, the effused urine removed, and, if it can be effected, the rent in the wall of the bladder should be closed by sutures. Antiseptic precautions must be taken during this operation, and the peritoneum be thoroughly disinfected.

In extraperitoneal rupture, on the other hand, Dr. Beck relies rather on an expectant than on an active and operative plan of treatment. He recommends in this form of injury to the bladder the use of a retention-catheter and occasional injections of antiseptic fluid into the vesical cavity. The patient's strength must, if possible, be maintained by tonics and highly nutritious fluid food. Endeavour should be made, by the local application of cold, to prevent inflammation about the seat of injury. The chief thing to avoid is rapid decomposition of the effused urine and blood. Should such an evil result, the surgeon should not hesitate to make free incisions, in order to give exit to septic material and thus prevent poisoning of the blood.

W. Johnson Smith.

Article 2675.

VINOGRADOFF ON THE MORBID ANATOMY OF MALARIAL FEVER.

In the *Voenno-Meditzinsky Jurnal*, 1882, March, April, and May, Professor K. N. Vinogradoff, of St. Petersburg, gives a valuable paper on this subject, based on his extensive experience in Bulgaria during the Russian-Turkish war, 1877–78. Some of the main results of his investigations may be reproduced here as follows.

Like other infectious diseases, malarial fever manifests itself in a series of lesions of internal organs. The most generally spread lesion is parenchymatous inflammation, which affects chiefly the liver, spleen, heart, and kidneys, but occurs also, though less constantly and in a less considerable degree, in the lymphatic glands, nerve-centres, gastro-intestinal and sudoriferous glands, testis, and striated muscles. The parenchymatous changes consist mainly in opaque swelling of cellular elements, with their subsequent hyperplasia, or atrophy, or degeneration. In the liver, the most frequent issue of a parenchymatous inflammation is local limited atrophy (though in some cases there occurs a diffuse hyperplasia of the parenchyma, as Kelsch and Kléner's observations show). The malarial parenchymatous inflammation of the kidneys (described in detail by Beckmann in Virchow's *Archiv*, 1879, Vol. xvi., p. 183; Zarzecki in his *Inaugural Dissertation*, St. Petersburg, 1870; Bogomoloff in the *Proceedings of the Caucasian Medical Society*, 1872-73, pp. 281-83; Afanasieff in the *Proceedings of the St. Petersburg Russ. Med. Soc.*, 1879, No. 10, p. 380), in a certain proportion of cases shows a tendency to take a progressive development and to pass into an ordinary form of Bright's disease. (This statement perfectly coincides with observations published in the *Voenno-Meditz. Jurnal*, 1877, Dec., p. 25, by Dr. Vasilieff, who strikingly often saw Bright's disease amongst malarial Russian soldiers in Bulgaria.) The parenchymatous alterations in the heart consist in slight opacity and swelling, as well as in atrophy and brown pigmentation of muscle-cells. The parenchymatous changes in the spleen are almost exclusively limited to the lymphoid elements of the pulp.

The malarial interstitial inflammatory process is spread less extensively than the former, and affects mainly the liver, spleen, and kidneys. The interstitial inflammation of the liver is characterised by the development of older fibrous tissue and young granulation-structure. The formation of the new interstitial tissue is not spread uniformly all over the organ, but is limited to certain regions, being localised mostly in the neighbourhood of branches of the portal vein and between the lobules. In the spleen, the development of new interstitial tissue proceeds along the veins of the stroma; the capsule, also, being not unfrequently found thickened. In the kidneys, the development of the interstitial tissue is observed both in the cortical and in the medullary substances, and, as in other organs, is of a diffuse character. (The author sometimes met, also, with circumscribed nodule-like formations of new interstitial tissue in the kidney, described as 'malarial granulomata' by Soldatoff, in the *St. Petersburg Med. Wochensch.*, No. 42, 1878, but he is not prepared to bring them into any etiological connection with the malarial process.) The interstitial changes occur also in the deep muscular layers of the heart, in the testes, and in the lymphatic glands, especially in those situated within the abdominal cavity.

The distribution of melanotic pigment over the organs is connected with lesions of blood-vessels. The vascular changes consist at first in swelling of the epithelioid lining of the capillaries, which may be so considerable as to lead to complete obliteration of the lumen of the vessel. Red blood-corpuscles become impacted between the enlarged epithelioid cells, and are gradually transformed into fine granules of yellowish and light-brown colouring matter. The latter is taken up by leucocytes and epithelioid tissue. The epithelioid cells undergo either proliferation, or fine granular disintegration, leaving then heaps of pigment-granules in the shape of scales, described by Frerichs and others. Fatty degeneration of the epithelioid lining of the capillaries of the brain (to which attention was drawn first by Grote, then by Retivtzeff, in the *Vrachebniya Vedomosti*, 1879, p. 421) is, according to Professor Vinogradoff, a most constant phenomenon in malaria, and is especially pronounced in the sites of extravasations. Pigment-masses are accumulated mainly in the spleen; and here again chiefly in the pulp, interstitial tissue, and vessels. The cells of the reticulum undergo partly proliferation with subsequent transformation into fibrous products, partly regressive modifications (albuminous and fatty degeneration). In the period of swelling many of these cells, as well as large lymphoid elements, absorb blood-corpuscles, which are slowly disintegrated and disappear, leaving light and dark-brownish pigment. In the bone-marrow, pigment is mostly found in the stellated cells of the reticulum. The pigment-masses accumulated in the liver are

not formed on the spot, but arrive from the spleen through the vena portæ. Two main sources supplying pigment in melanæmia are the spleen and the bone-marrow. According to the author, this fact is proved by the occurrence in them of striking phenomena of disintegration of blood-corpuscles; by a considerable accumulation in them of colouring matter; and by their anatomical arrangements allowing pigment to easily enter into the circulation. Another source of pigment-formation is given in the migration, with subsequent disintegration, of red blood-corpuscles, observed in the brain. When disintegrating, some of the blood-corpuscles coalesce and form hyaline or diaphanous bodies or scales, identical with those found by Professor L. V. Popoff in the brain of uræmic men and of uræmic and cholæmic dogs. (See the *Proceedings of the St. Petersburg Russian Medical Society*, 1880, p. 625.) Beside the liver, spleen, bone-marrow, and brain, the author observed deposition of colouring matter in the capillaries of the testes, gastro-intestinal mucous membrane, and papillary layer of the skin; in the lung it was seen in the interstitial tissue and epithelium of the alveoli; in the lymphatic glands it was present chiefly within leucocytes. As to the pigment itself found in malaria, it does not differ in any way from that derived from red blood-corpuscles in other diseases (morbus maculosus, &c.).

V. IDELSON, M.D.

ARTICLE 2676.

WEIST ON FOREIGN BODIES IN THE AIR-PASSAGES.

THE recently published initial volume of the *Transactions of the American Surgical Association* contains a paper by Dr. I. R. Weist, of Richmond, Indiana, in which the results are given of a study of 1,000 cases with a view to determining the propriety of bronchotomy in treating foreign bodies in the air-passages. The author begins by quoting from several surgical authorities to prove that it is at present a doctrine in surgery, that, as a general rule, the certainty of the presence of a foreign body in the air-passages makes bronchotomy necessary. An analysis is next given of an aggregate of 1,000 cases, mainly supplied in response to a circular, asking for a report of cases, extensively distributed by the author throughout the United States and Europe. Of the total number of cases, 897 are reported as not having been previously published.

In 63 cases the foreign body was removed by operative measures other than bronchotomy—*e.g.* with forceps, with or without the aid of the laryngoscope, &c. There remain 937 cases; of these, 599 were not subjected to bronchotomy; 460 of the patients recovered, or 76·79 per cent.; 139 died, or 23·20 per cent. Bronchotomy was performed in 338 cases, with 245 recoveries, or 72·48 per cent., a difference in favour of non-interference of 4·31 per cent. Combining the cases here collected with those of Professor Gross (*A Practical Treatise on Foreign Bodies in the Air-Passages*), and Mr. Durham (*Holmes's System of Surgery*), the result is a total of 955 cases without operation, of which 283, or 29·78 per cent., died. The sources named furnish a total of 719 bronchotomies, with 178 deaths, or 24·75 per cent. As a result of this study of 1,674 cases, it appears that without operation there is one death in 3·5 cases, and one in 4 after bronchotomy. In the table appended to Dr. Weist's paper, 36 cases of laryngotomy give 30 recoveries and 6 deaths; 26 cases of laryngo-tracheotomy give 19 recoveries and 7 deaths; and 276 cases of tracheotomy give 196 recoveries and 80 deaths. The combined tables of the authors, Professor Gross and Mr. Durham, show that after laryngotomy for foreign bodies in the air-passages 1 patient in 5 dies, and after laryngo-tracheotomy and tracheotomy 1 in 4 dies. Dr. Weist asserts that he does not seek in this paper to bring bronchotomy into discredit. In a large number of cases, he states, the larynx or the trachea must be opened to save life, and the surgeon who fails to urge the necessity of prompt operation will be neglectful of his duty. He strives only to show that the present accepted rule is too broad, and that, in many cases of foreign body in the air-passages, the patient will be more likely to recover if trusted to the chance of spontaneous expulsion than if subjected to operation. When the nature of the foreign body is known, the propriety of an operation can be more easily determined than when it is not, as there can be no doubt that certain substances are much more likely to be expelled spontaneously than others. Among the great variety of substances that sometimes pass accidentally into the air-passages, water-melon-seeds, it is stated—after grains of corn—are the most frequent. Dr. Weist's table shows that in the cases in which a water-melon-seed was the foreign substance, there was spontaneous expulsion and recovery in 93·33 per cent., or 16·86 per cent. more than in the cases subjected to bronchotomy. Indeed, in the cases generally in which seeds of different kinds and of miscellaneous substances found a lodgment in the air-passages, there is a percentage in favour of non-interference. When the foreign body is impacted in one of the bronchia, the chances of expulsion at the time of the operation are small, and attempts at extraction by instruments usually end in failure. In cases where the foreign body cannot be removed after tracheotomy, death from pneumonia is more likely to occur than in cases without operation. Dr. Weist holds that it is a legitimate inference in cases of impaction that the chances of life are diminished by bronchotomy. In every case that offers a reasonable prospect of success an effort at direct extraction should be made. In ninety-three of Dr. Weist's collected cases the foreign body was thus removed.

Although cases have been reported in which expulsion of a foreign body was effected during the acts of sneezing or vomiting, Dr. Weist does not hold errhines or emetics in high esteem; and, with regard to inversion of the body and succussion, he thinks that the danger of causing immediate death is so great as to overshadow the chances of success. Whilst fully in accord with the surgeons who teach that these means should never be employed unless the surgeon be ready to open the windpipe at once in case of emergency, Dr. Weist believes that it would be still better teaching to say that these methods should *never* be resorted to until after an opening had been made in the windpipe.

Bronchotomy, it is stated, should be resorted to without unnecessary delay whenever the symptoms continue urgent, or attacks of threatening suffocation come on frequently, provided that direct extraction is not practicable. When threatening symptoms are continuous, it will generally be found that the foreign body is lodged in the larynx, and is causing signs of

rapid strangulation by reflex action, or a constantly increasing embarrassment of respiration by stenosis depending on œdema or active inflammation. In such cases, Dr. Weist thinks, the sooner an operation is performed, the better. When the foreign body is loose in the trachea, its movements cause frequent attacks of strangulation. In such a case bronchotomy is demanded, both to afford relief and to obviate the great danger of sudden death from a lodgment of the foreign body in the rima glottidis.

Dr. Weist has drawn the following conclusions from a study of his collected cases.

1. When a foreign body is lodged either in the larynx, trachea, or bronchi, the use of emetics, errhines, or similar agents should not be practised, as these increase the sufferings of the patient, and do not increase his chances of recovery.

2. Inversion of the body and succussion are dangerous, and should not be practised unless the windpipe has been previously opened.

3. The presence simply of a foreign body in the larynx, trachea, or bronchi, does not make bronchotomy necessary.

4. When a foreign body causes no dangerous symptoms, bronchotomy should not be performed.

5. While a foreign body remains fixed in the trachea or bronchia, as a general rule, bronchotomy should not be performed.

6. When symptoms of suffocation are present or occur at frequent intervals, bronchotomy should be resorted to without delay.

7. When the foreign body is lodged in the larynx, there being no paroxysms of strangulation, but an increasing difficulty of respiration from œdema or inflammation, bronchotomy is demanded.

8. Where the foreign body is movable in the trachea, and excites frequent attacks of strangulation, bronchotomy should be performed.

W. JOHNSON SMITH.

ARTICLE 2677.

GRADENIGO ON MUSCULAR PSEUDO-HYPERTROPHY.*

'MUSCULAR pseudo-hypertrophy' is the name given by Dr. Gradenigo (junior), of Padua, to the affection variously known as pseudo-hypertrophic paralysis, lipomatous muscular atrophy, myo-sclerotic paralysis, as well as by many other appellations. Though the author is not satisfied with the name he suggests himself, he strongly objects to the word paralysis forming a part of the title of the disease, inasmuch as it seems to imply a nervous origin.

A rapid glance at the history of the disease is given. Sir Charles Bell's name, however, is not mentioned; Costa and Gioja being credited with the first description.

Seven cases are given in detail. Of these, six are from the author's own observation. In five cases, there was muscular weakness from early infancy; but marked symptoms did not show themselves until from three to seven years. In the other two cases, the children were in all respects robust and healthy until the ninth and the eleventh year respectively. In regard to etiology, the author, after pointing out the usual facts about the occurrence of the disease mostly in the male sex and in early childhood, goes on to remark, concerning heredity, that cases are commonly enough observed in ascending or collateral branches of the family. Though women rarely have the disease, it is they who transmit it to their sons; the males affected with it rarely reaching the age of puberty. The author was not, however, in any of his own cases able to establish the fact of heredity. In several of his cases, fever or an acute illness was the exciting cause.

Touching the morbid anatomy, a note of warning is raised as to the liability of some seemingly diseased appearances to be caused artificially. Amongst the various conditions likely in this way to lead into error, it may be specially mentioned that Müller's fluid gives to healthy muscle the appearance of a waxy degeneration. The morbid changes found in the muscles, in such of the author's cases as were examined microscopically, were chiefly as follows. There was increase of connective tissue and of fat. In some of the fibres, striation was less marked than was normal; portions that had been immersed in Müller's fluid lost all appearance of striation, had an aspect of amyloid degeneration, and presented a series of transverse segmentations. The diameter of the fibres varied much; even a single fibre was found greatly thickened in some parts of its course, and very thin in others. The most striking change, however, was the tendency to split longitudinally and sometimes to unite again. It was most observable in the gastrocnemius and in the supinator longus. This dichotomous division is regarded by the author as of high importance. It has, however, received little attention from other observers. Cohnheim, Knoll, Kolaczek, and Brieger mention it cursorily. In regard to the intensity of the alterations in the different muscles, the glutei exhibit the most advanced degeneration; then follow the gastrocnemius, the deltoid, the lumbar muscles, and the supinator longus. In these there is usually enlargement, and fatty degeneration predominates. The biceps, the pectoralis major, and the latissimus dorsi are generally found to be atrophied and sclerotic. The masseters and temporals are very rarely affected. The muscles of the eye, of the face, of the larynx, the diaphragm, and some others, are never implicated. The morbid process, as it advances, may follow one of two courses. The fat may be nearly altogether absorbed, and the newly formed connective tissue shrinks and gives rise to contractures. Or the fat may, instead of being absorbed, continue to increase.

A very minute examination is made of the various attitudes adopted by patients in standing, walking, and moving. The economy of muscular force appears to be the principle underlying them all. The author thinks that in the earlier period of the disease the muscular enlargement is of a compensatory character, and that the enlarged muscles, though actually weakened, have a higher functional power than the muscles of normal or diminished size. On this point he lays much stress, and divides the muscles of the body into three groups, according as they are increased, diminished, or normal in size. The muscles that are used much and with effort become enlarged; those that are used frequently, but without much expenditure of force, retain their normal bulk; while those that are rarely employed shrink and undergo atrophy.

A long inquiry into the pathogenesis of the disease leads to the conclusions that the alterations in the muscles are the result of a disproportion between the

* 'Contribuzione alla Patogenesi della Pseudo-ipertrofia muscolare,' pel Dott. Giuseppe Gradenigo (jun.) di Padova. Milano: Fratelli Rechiedei. 1883.

development of the muscular tissue and of the connective tissue, the disproportion being due rather to congenital weakness of the muscular tissue than to overgrowth of the connective. The weakness does not stand in necessary connection with any primary nervous lesion.

The differential diagnosis from various kindred affections is set out in contrasted tables of symptoms. As to prognosis, death usually occurs from some intercurrent malady about the fifteenth year. In adults, especially women, the prospect is a trifle less gloomy.

Massage, electricity, nutritious diet, and kindred measures should always be tried. Frequently a temporary improvement is obtained. Strychnine, nitrate of silver, and other nervine tonics are without good result.

Amongst the conclusions we may signalise the following. 1. The disease is essentially myopathic. 2. The basis of the anatomical changes is a congenital incapacity of resistance (deficient histogenic energy) of the striated muscular fibre. 3. The muscles that are not developed from the primitive muscular laminæ of the embryo are unattacked by the disease. 4. The intensity of the morbid process in the different muscles affected varies in definite relation with the work they have to do. 5. The enlargement of the muscles is of a compensatory nature. 6. The wasting and the enlargement of certain muscles may be reduced to a single morbid process; the anatomical fact does not differ essentially from what is found in other diseases of muscle. The dichotomous division of the muscular fibres may perhaps be regarded as characteristic of this affection. 7. The pathogenesis of the disease, at first myopathic, is later on neuro-myopathic.

The essay extends over more than a hundred large octavo pages, and is very concisely written. The foregoing account, therefore, represents only a few of the more interesting points in this admirable monograph.

WILLIAM R. HUGGARD, M.D.

ARTICLE 2678.

KRASSOVSKY ON OVARIOTOMY IN RUSSIA.

ON December 23, 1862, Dr. Krassovsky performed the first ovariotomy ever undertaken in Russia. He has recently published, in the *St. Petersburger Medicinische Wochenschrift*, the results of his subsequent experience. Up to January 1883, he had performed 128 ovariotomies, removing 171 cystic ovaries, including cases where both ovaries were diseased. Of the 128 patients 70 lived and 58 died, a mortality of 45 per cent. Of the ovariotomies, 113 were complete; 91 unilateral, of these 40 died; 22 double, of these 10 died; 57 of the unilateral cases involved the right ovary. There were 9 incomplete operations, of these 6 died; all the 9 were unilateral, 4 involving the right ovary. Six were 'mixed,' by which term Dr. Krassovsky really means incomplete operations, where the disease was bilateral and only one ovary could be removed; of these 2 died. In 117 cases the contents of the cysts were colloid, 44 of these ended fatally; 5 contained 'serous' fluid, 2 being fatal; 3 were dermoid cysts, 2 ending fatally; 2 were papillomatous cysts, and 1 of these cases died. In another case, where both ovaries were cystic, one contained serous, the other colloid contents. In 84 cases there was marked emaciation, or distinct cachexia; 41 of these died. The remaining 44 were in good health at the time of operation; of these 17 died.

Age of the Patients.

Age.	Number of Operations.	Complete Ovariotomies.		Incomplete Ovariotomies.	
		Died.	Percentage of Mortality.	Number of Operations.	Died.
15 to 20	7	1	14·3	0	0
20 to 25	18	5	27·7	2	1
25 to 30	20	9	45·0	3	2
30 to 40	31	13	41·9	2	1
40 to 50	18	10	55·5	5	2
50 to 60	18	11	61·0	3	2
Over 60	1	1	100·0	0	0

Thirty-three of the patients were reasonably believed to be virgins, and 13 of these died; 30 had never borne children, and 13 of these died: 65 had become mothers, and 32 of these died.

Twenty-four of the operations were performed in private houses, all either in the city of St. Petersburg or in its suburbs; of these patients, 13 recovered and 11 died. One hundred and four of the operations were performed in hospitals in the same city; of these patients, 57 recovered and 47 died. In one of these hospitals, the hygienic conditions were very unfavourable. The mortality was less in summer than in winter.

In 36 cases no adhesions were found; 11 of these died. The omentum was adherent in 42 cases, the parietal peritoneum in 41, the pelvic peritoneum in 9, the broad ligament in 7, the liver in 2, the spleen in 1, the mesentery in 7, the intestines in 26, the urinary bladder in 2, the uterus in 19. To check hæmorrhage from adhesions, silk ligatures were employed, but in four cases the cautery was applied, and perchloride of iron, styptic wool, and acupressure were also made use of whenever these methods were deemed necessary.

As regards preliminary and palliative measures, 96 of the patients had been under a course of mineral waters, those containing iodine being preferred. One case had been subjected to electro-puncture in Dresden; she recovered from ovariotomy. Sixteen had been tapped through the abdominal walls once, and 4 of these died; 8 had been thus tapped twice, and 5 of these died; 1, who recovered, had been tapped three times; 1, who had been tapped from the vagina, died after operation; 1, who recovered, had been tapped once from the vagina and once through the abdominal walls.

Chloroform was employed in all these 128 ovariotomies; in some hysterical patients, and a few other cases, where the anæsthetic acted imperfectly, a subcutaneous injection of hydrochlorate of morphia was administered. In two cases, where the cyst was very bulky, causing serious thoracic symptoms through its pressure, a small abdominal incision was made after the local application of ether-spray; the cyst was then emptied as much as possible, and when the pulse became stronger the administration of chloroform was commenced. None of the cases died under the anæsthetic.

Tetanus occurred in two cases, appearing on the fourth day, when symptoms of peritonitis existed, in one case, and on the third day, with internal hæmorrhage, in the other. Both cases died.

The average duration of the operation, as performed by Dr. Krassovsky, was 1 hour 41 minutes. The shortest case lasted 25 minutes; the longest, an incomplete operation, 4½ hours.

The length of the abdominal incision ranged from 6·5 to 33 centimètres, 'and had no influence on the result of the operation.'

The pedicle was treated after several different methods by Dr. Krassovsky. In the double cases complete intraperitoneal ligature was performed in 13 cases with 4 deaths; in 8 the cautery was used, after Bakèr Brown's method, and 6 of these died.

In the cases where only one ovary was affected with cystic disease, Baker Brown's cautery was employed for securing the pedicle in 56 operations; in 3 of these, the iron failed to arrest hæmorrhage, and complete intraperitoneal ligature was found to be necessary. Of the cases where the cautery alone was employed, 29 recovered and 19 died. The total mortality of the cautery cases, including the 8 where ligature was also needed, amounted to 37·5 per cent. The actual cautery was made use of in all but 4 cases, where the thermo-cautery was employed.

In 26 cases, complete intraperitoneal ligature of the pedicle was practised; 14 of these proved fatal. In 24 of these, silk was the material composing the ligature, in 1 silkworm-gut, and in 1 catgut. In 2 cases, 1 of which proved fatal, incomplete intraperitoneal ligature was employed, that is to say, the ends of the ligature were brought outside the external wound. In 3 cases the pedicle was secured externally by Dr. Krassovsky's special clamp; 2 of these died. In 3 cases the pedicle was ligatured and retained by a suture between the lips of the abdominal wound; 1 of these cases ended fatally. In one, a fatal case, the cautery was required after the ligature had been applied.

In the 6 'mixed' cases, complete intraperitoneal ligature was employed in every instance for securing the pedicle of the removable tumour; the opposite tumour was always partially cut away, and the remainder retained in the abdominal wound either by suture or by means of a wire *écraseur*. This was also done in the incomplete operations on single cysts.

Dr. Krassovsky almost invariably employed metallic sutures for the abdominal wound, and in 10 cases did not include the peritoneum. Different forms of metallic suture were used.

After the operation, the wound was dressed, with dry charpie in 12 cases; with charpie simply soaked in water in 14; with charpie soaked in glycerine in 7; with charpie soaked in oil of almonds in 2; with charpie soaked in a mixture of glycerine and carbolic oil (1 drachm of the oil to 6 ounces of glycerine) in 43; with collodion in 3. 'Seven cases were operated upon with Listerian precautions, 4 recovered, 3 died; in 40 cases the nature of the dressing was unfortunately not recorded.' Dr. Krassovsky had better results with clean water dressings than with carbolic acid applications, with or without spray.

In 37 cases suppuration in the track of abdominal sutures took place, 2 of these died.

In one incomplete case, that died, a sponge, of the size of a goose's egg, was left in the peritoneal cavity.

In 21 cases, of which 14 died, drainage-tubes of the usual form were introduced; they were passed into Douglas's pouch through the posterior *cul-de-sac* of the vagina in such a manner, that one end of the tube projected out of the vagina, whilst the other was made fast in the lower extremity of the abdominal wound. In introducing the tube, the intestine appears to have been wounded in one case where the patient recovered. In another case, that died, the bladder was wounded.

These statistics, being very complete, are highly instructive, and Dr. Krassovsky deserves much credit for having published them at great length. It is well known that the hygienic conditions of Russian hospitals are still far from satisfactory, and this fact, no doubt, played a larger share in the high mortality of the above series than did any of the somewhat obsolete details and appliances which found favour with the operator. The statistics of other Russian operators, down to the year 1882, are recorded in the present volume of the London Medical Record, p. 27.

Alban Doran.

Article 2679.

SANDS ON INTERNAL ŒSOPHAGOTOMY IN THE TREATMENT OF CICATRICIAL STRICTURE.

Dr. Henry B. Sands, of New York, considers, in the *New York Med. Jour.*, 1884, Nos. 6 & 8, the value of the operation known as internal œsophagotomy, and gives particulars of an aggravated case of stricture in which this procedure was carried out with some success.

Gradual dilatation may, in the opinion of Dr. Sands, be justly regarded as the safest and best mode of treatment, whenever it is practicable. If the stricture be impermeable to instruments, dilatation is, of course, impossible; but even when bougies can be readily inserted, dilatation is not always successful, as some maintain, in restoring the distensibility of the contracted parts. The introduction of dilating instruments is not always safe, especially when the stricture is narrow. Finally, treatment by dilatation often requires to be continued indefinitely, in order to prevent recontraction. But, as in the case of urethral stricture, persons suffering from stricture of the œsophagus are very prone to neglect themselves, avoiding dilatation until it becomes difficult or impossible.

Internal œsophagotomy has as yet been performed in so small a number of cases, that its value cannot be determined by statistics. However, the recovery of nine out of twelve patients, in whom this procedure has been carried out with beneficial results, suffices to claim for it serious consideration. When the stricture is narrow, yet permeable, of slight longitudinal extent, not exceeding, perhaps, a centimètre, and cannot be dilated to a size sufficient to permit easy deglutition, the operation of internal œsophagotomy Dr. Sands believes to be the most hopeful expedient within reach. The risk attending it is held to be warranted by the hopeless character of the disease, and by the results of the alternative operation of gastrostomy. The amount of benefit to be derived from the operation will depend on the form and extent of the existing lesion. If the stricture be occasioned by a narrow ring of fibrous tissue, or by a valve-like membrane, a radical cure will probably ensue when this has been divided. In most cases, however, the operation will prove only an aid to dilatation, rendering this practicable, and perhaps casually successful in accomplishing a radical cure. In proportion to the length and in-

duration of the stricture, the utility of internal œsophagotomy will diminish, and in many cases it would be obviously unwise to attempt it.

External œsophagotomy has been performed in a few cases, with the view of establishing a fistula through which the patient may be fed by means of a stomach-pump introduced through the fistula and into the stomach. The results, however, in these cases were not such as to afford any encouragement for a repetition of the operation; and, Dr. Sands points out, if the patient be doomed to be fed always through an artificial opening, gastrostomy is the operation which should be selected, as it secures a ready access to the alimentary canal below the stricture, and places the fistula in a situation where it can be easily hidden from view. Recently, however, Gussenbauer has published a report of two cases of deep-seated stricture, which prove that external œsophagotomy may be of great service, by enabling us to deal successfully with strictures that are impermeable to instruments introduced by the mouth.

Dr. Sands states that gastrostomy can never be anything more than a last resort in cases otherwise hopeless. In ten out of nineteen cases collected by Alsberg, in which gastrostomy was performed for cicatricial stricture, the patients died within the first few days, mainly from peritonitis (*Langenbeck's Archiv*, Vol. xxviii., p. 75). Later records, however, have been more favourable, and Lefort (*Gaz. des Hôpitaux*, 1883, p. 714) has alluded to five cases in which the patients were known to be alive at the following periods after operation: four months and a half, eight months, twenty months, two years, and three years. There is reason to hope that with increasing experience the percentage of mortality attending gastrostomy may be considerably reduced.

After alluding to a remarkable case under the care of Bergmann, in which a tight œsophageal stricture was attacked with success, not only from the mouth, but also from below through a gastric fistula, Dr. Sands comes to the conclusion that certain forms of œsophageal stricture, which have heretofore proved unmanageable, are no longer beyond the reach of surgical art, and that, in some of these, internal œsophagotomy is capable, not only of saving life, but also of re-establishing the function of deglutition, so essential to its enjoyment.

W. JOHNSON SMITH.

ARTICLE 2680.

BERNAYS ON EXTIRPATION OF THE UTERUS THROUGH THE VAGINA.

DR. A. C. BERNAYS relates the following case in the *St. Louis Medical Journal* for April.

The patient, aged 52, had epithelioma of the vaginal portion of the uterus. The tumour was hard and well-defined and surrounded the os, in the shape of a horseshoe, upon the left side, leaving a small margin at the right angle of the os entirely free. A narrow strip of the mucous membrane of the vaginal vault upon the left side was also ulcerated, and in connection with the tumour surrounding the os. The cavity of the uterus proved of normal length; the position and mobility of this organ were also normal. The appendages and surrounding tissue were found intact. Dr. Bernays had in his possession a history of 166 cases of vaginal hysterectomy. This list showed 118 recoveries and 42 deaths. He therefore determined to operate. The vagina was thoroughly cleansed in the evening previous to the morning of the operation, by injections with water. The patient was placed on her back with the hips flexed upon the abdomen. A broad, flat Sims's speculum was introduced for the purpose of holding down the perinæum and compressing the lower part of the rectum. The lateral and anterior walls were held wide apart by broad vaginal retractors, and a catheter was introduced into the bladder and another into the rectum, which proved very useful guides. The operator began by first grasping the vaginal portion with a vulsellum forceps and drawing it forcibly outwards and to the right, thereby stretching the left lateral vault of the vagina, and with it, to a great extent, the left broad ligament, in a transverse direction; he then made a small incision, through the mucous membrane only, near the middle of this tense mass of tissue a little towards the bladder; through this puncture an aneurism-needle, armed with a very heavy double silk ligature, was passed, in such a manner, upwards and backwards, that about one inch of the tissue of the broad ligament along the side of the uterus was surrounded. The blunt point of the instrument was then forced downwards and outwards until it formed a prominence under the mucous membrane of the vagina, opposite the point of entrance, but about three-fourths of an inch distant towards the rectum. In cutting down upon the point, the needle was immediately pushed forwards and the ligature caught by a tenaculum, after which this curved aneurism-needle was withdrawn, threaded again, and the same proceeding performed on the right broad ligament. These ligatures embraced the lateral portions of the fornix of the vagina, and as much of the broad ligament as could possibly be reached. The intention was to grasp the uterine arteries in this ligature, and thus obviate the principal sources of hæmorrhage. The operator next firmly tied one of the threads on each side, intending, if necessary, to use the loose ones as loops to draw down the ligament at a later stage, if this should be found expedient. A nearly circular incision was then made through the fornix of the vagina around the neck of the womb, and well within the ligatures. There was very little bleeding, and Dr. Bernays continued to dissect up around the neck of the womb, carefully working upwards between the bladder and uterus in front, and between the rectum and uterus behind. By placing the narrow blade of the knife flat upon the womb, and sticking close to it, this dissection was done very safely and rapidly, with little danger of cutting into the bladder. When the peritoneal cavity was opened, the operator took up a probe-pointed knife, and, under guidance of his finger, finished the division of the peritoneum around the body of the uterus. Thus far hardly an ounce of blood was lost, as the ligatures already applied had entirely obviated the necessity of applying any more to stop hæmorrhage. The index finger of the operator's left hand was then passed into the anterior *cul-de-sac*, and, under its guidance, a Langenbeck's blunt retractor was slipped over the fundus of the uterus; and then Dr. Bernays withdrew his finger, and held the os uteri with a vulsellum in his left hand, and the fundus with a retractor in his right. By allowing the neck to go upwards with his left hand, he readily succeeded in doubling the organ upon itself, and draw-

ing the fundus with its attachments into the vagina. Through the anterior *cul-de-sac* he grasped the fundus with a one-pronged Hegar's womb-holder, and, drawing it first to one side, passed a handled needle with a double ligature, along the side of the body of the womb, in such a manner that he could pierce the broad ligament below the point where it covers the ligamentum rotundum. Again, the thread being caught with a tenaculum, the needle was withdrawn, and the ligature fastened in such a manner that it firmly included the Fallopian tube, the ovarian artery, the round ligament, in fact, everything contained in the folds of the broad ligament. This being carefully done on both sides, the womb was cut away, well within the ligatures, in such a manner that they included sufficient peripheral tissue to prevent them from becoming loosened too soon. On examination, the womb was now found to be quite loose, and only held, or swung, as it were, on a band of tissue, which was left between the gap cut into the broad ligament from above, and the incision which started from the neck. By pulling the womb first to one side and then to the other, a ligature was quickly thrown around this mass of tissue on both sides with the aneurism-needle, and these remnants firmly tied. All that was left to do now was to cut through these tissues, close to the body of the womb, when it fell out of the vagina with the vulsellum and Hegar's womb-holder attached. The field of operation was then cleansed with warm water, the six ligatures were drawn together in a bunch, and the pelvic cavity sponged out. There was some insignificant bleeding from an unknown source, which ceased after a few sponges had been introduced. Water, which was allowed to run through the vagina from an irrigator, returned perfectly clear. The fornix of the vagina was found to be well contracted, there was no tendency to prolapse of the bowels, and by very slightly drawing on the six ligatures (the two ends of the second double ligature and the loose end of the first on each side), the vault of the vagina was almost entirely closed by the stumps of the broad ligament, which were drawn down to a small knot on each side by the three ligatures. Not knowing exactly what process of healing would ensue, Dr. Bernays determined to leave the wound open, applying no sutures, either to the peritoneum or to the vaginal mucous membrane; trusting that any secretions of the wound might be led outwards or drain, as it were, along the thick silk threads, into the vagina, where they could be readily removed. Without placing any plug of cotton or any drainage arrangement whatever into the vagina, the operator carried the patient to her bed and an injection of morphia was administered. The temperature of the patient at no time during the healing process reached 100°, with the exception of one afternoon during the sixth day, when she had a chill, followed by a temperature of 104°, that lasted about three hours. An examination showed nothing particularly alarming; about one-half teaspoonful of slightly bloody matter was found in the cavity of the speculum. During five days the water, used for injections, always returned slightly reddened to the bedpan, but was not in the least offensive in smell. These injections were made three times daily, and once about midnight. After this period there was a slight purulent discharge, and about the eighth day it became slightly offensive. About this time, also, a tender spot, in the right ovarian region, of the size of a hen's egg, developed; it remained for ten days and then gradually disappeared. On the sixteenth day the first ligature came away; its loop was found to be of about the calibre of a small lead-pencil; the others gradually came away by the injections, which were reduced to only two daily after the third week. The secretions now became very thick and of a yellow colour. The patient left her bed, for the first time, on the twenty-eighth day; she gradually improved in looks, her appetite returned, and she gained considerably in weight, and left the hospital in good health on March 13, 1884, the operation having been performed on Dec. 12. The vagina had completely closed up; there was no secretion at all, as there was no wound. The vagina ended in a blind sac, like the finger of a glove, and there was no hardness to be felt anywhere. ALBAN DORAN.

ARTICLE 2681.

LUCIANI ON THE FUNCTIONS OF THE CEREBELLUM.*

IN June 1883, Professor Luciani laid before the Medico-Physical Society of Florence an account of his investigations into the functions of the cerebellum. He succeeded in keeping alive for eight months a dog in which he had removed the organ almost completely. At the *post mortem* examination the flocculi, the truncated peduncles, and the degenerated remains of the inferior vermiform process, were the only portions still to be seen. The phenomena presented by the animal are grouped in three periods. Immediately after the operation there was 'inco-ordination' of all voluntary movements; so that the animal could not stand, walk, swim, or feed itself. Every attempt to move threw the anterior limbs into a state of tonic extension, and caused strong contraction of the extensors of the vertebral column and of the head, with tendency to fall backwards. These symptoms are ascribed by Dr. Luciani, not to the loss of the cerebellum, but to the irritation arising from the injury. They disappeared in proportion as the fever, suppuration, and metastatic abscesses subsided. About two months after the operation, the second period of the phenomena began, and lasted about four months. The incoordination disappeared altogether in swimming; and a special form of ataxy showed itself in standing, walking, and isolated voluntary acts. The muscular movements lacked steadiness and force; and there was a constant clonic motion, but not so much as to prevent the performance even of intentional acts. When the power of walking was first regained, the animal would fall after a few steps. Later, a fall was avoided by spreading out the paws. The essential condition in the cerebellar ataxy appeared to be lack of tone and deficient muscular energy. The third period, lasting about two months, was characterised by various nutritive disturbances. There was suppurative inflammation of the middle and external ear on both sides, with catarrhal conjunctivitis due in part, at any rate, to external irritants. Rapid and general failing in nutrition took place; so that at the end an extreme amount of marasmus was reached. After death, all the remaining portions of the nervous system were found to be perfectly normal.

In a second dog, the right half of the cerebellum was removed in June 1882. In October the sigmoid

* *Riv. Sper. di Fren.*, Fasc. i. and ii., 1884; *Lo Sperim.*, July and December 1883.

gyri of the brain, containing the voluntary motor centres of the limbs, were stimulated mechanically and by electricity, and afterwards thoroughly extirpated on both sides. In May 1883, the remaining left half of the cerebellum was removed. The stimulation of the brain gave rise to identical effects on the two sides. The extirpation of the sigmoid gyri caused a greater amount of paresis of all the limbs than occurs from the same cause in dogs having the cerebellum uninjured. The final removal of the remaining left half of the cerebellum was followed by two phases of muscular disorder; 'inco-ordination' at first, and then cerebellar ataxy very nearly as above described. The inco-ordination, as the author styles the tonic contraction of certain muscles when movements were attempted, was confined to the side corresponding to the portion last removed, that is, to the extensors of the left side of the vertebral column and to the left forelimb. The ataxy, as the unsteadiness of movement from weakness is named, extended to all the limbs. From these facts Professor Luciani draws the following amongst other conclusions; that the cerebellum does not lie in the path of the centrifugal fibres from the brain to the spinal cord; that the inco-ordination is due to the irritation of the peduncles; and that the ataxy represents the disorder due to loss of the cerebellum; that the function of the cerebellum is not to co-ordinate movements, whether co-ordination be understood as an elaboration of voluntary impulses (as Flourens probably meant), or as reflex muscular adaptation (as in Ferrier's view). The fact that the removal of the motor centres of the cortex greatly increased the weakness, does not show that these centres can at all replace the abolished function of the cerebellum. By way of summing up its functions, the author says that the cerebellum 'is a central organ on which depend the tone and a great part of the disposable nervous energy of the motor elements of the muscles.'

A third dog was devoted to solve the question whether each half of the cerebellum exercises its functions over the corresponding half of the body or over both sides alike. The right half of the organ was removed. For the first five days, the signs of peduncular irritation were observed on the right side only; then for five days they became bilateral, and were more marked on the left side. The 'ataxy' that followed these phenomena was nearly the same on both sides, except that there was a slight tendency to turn the head to the right and to raise the right fore leg more than the left. From this it is inferred that each lateral half influences both sides of the body. Prof. Luciani thinks, therefore, that the cerebellum is an organ physiologically one; that it is not, as Ferrier holds, a complex of several organs or centres functionally distinct. [Dr. Luciani's rather unhappy use of the terms 'inco-ordination' and 'ataxy' has been criticised by Dr. Corso. The recent experiments of Schiff do not make the functions of the cerebellum easier to comprehend than they were before. Schiff (*Pflüger's Archiv*, Band 31 and 32, 1883) found that only the inferior third of the thickness of the organ had any discoverable influence; that perfectly symmetrical lesions of the two sides, no matter how great in extent, were altogether without effect; while even slight unilateral lesions, provided they involved the inferior third, gave rise to serious disorders.—*Rep.*]

WILLIAM R. HUGGARD, M.D.

ARTICLE 2682.

BOEGEHOLD ON INJURIES OF THE THORACIC DUCT.

DR. E. BOEGEHOLD, of Berlin, reports in the *Archiv für Klinische Chirurgie*, Band xxix., Heft. 3, a case in which, during an operation for the removal of a large cancerous growth from the neck of a man, aged 45, the thoracic duct was wounded near its termination in the left jugular vein. The rarity of this lesion led the author to look into the literature of the subject; and, by study of reported cases of compression or occlusion of the duct by tumours, effusions, &c., and of cases of traumatic or pathological opening of the duct, and also by experiments, he has endeavoured to solve the following questions. Is an isolated injury of the thoracic duct possible, and can such be produced without a probably fatal injury to some other important organ? What are the results of an injury of the thoracic duct? Is injury of the duct ever curable?

It is pointed out that abnormalities often occur in the course, relations, and size of the duct. Occasionally there are two trunks instead of one; and the duct opens sometimes into the right innominate vein, or into the vena cava, or the vena azygos, or one of the lumbar veins. In consequence of a deviation from its normal course, the duct may be nearer the surface of the body and become more exposed to injury; and in an instance of double duct, whilst one trunk may be completely closed by the pressure of some morbid growth, the chyle may flow freely through the other.

The question whether the thoracic duct can be wounded without simultaneous fatal injury of other organs must, Dr. Boegehold states, be answered in the affirmative. It is granted, however, that, under ordinary conditions, a wound of the duct can have been directed only from behind or laterally, and a penetrating instrument taking either of such directions would not, except under very rare circumstances, leave other organs uninjured. It is thought remarkable that no case has been recorded, except that by Dr. Boegehold, of wounding of the thoracic duct in the neck where, in the extirpation of large tumours affecting this region, it seems to be readily accessible.

In dealing with the question of results of injury of the thoracic duct, Dr. Boegehold states that it has been proved by clinical records and by experiments on animals, that the complete integrity of this canal is not absolutely necessary for the maintenance of life. Several cases have been collected in this paper which show that there may be complete obliteration or compression of the duct, with a total absence of symptoms. It seems, Dr. Boegehold states, that a collateral circulation is very rapidly established. Schmidt-Mülheim has proved that in dogs, occlusion of the duct, which in these animals always exists as a single canal, does not influence in any way the digestion and absorption of albuminous material. Obstruction of the duct consequent on injury is not therefore a necessarily fatal lesion. But when the duct is wounded, without becoming obstructed, the patient is threatened by two dangers; compression of the lungs and heart by the accumulation of effused chyle, and loss of this fluid. That dangerous compression of the lungs and heart may be caused through effusion of chyle, and that, in such instances, suffocation can be prevented only by penetrating into the pleural cavity and removing the effused

fluid, has been proved by the experiments of Lower and the author of this paper. It then becomes necessary to compensate for the loss of chyle by administering good and abundant nourishment.

The diagnosis of a wound of the thoracic duct may be readily established by the abundant fatty elements contained in the fluid removed on puncture. In discussing the question as to what means there are in the organism for the healing of wounds in the thoracic duct, Dr. Boegehold points out that it has been proved by several observers that the walls of the thoracic duct are endowed with contractility. In a case of a small wound of the duct, this contractility may suffice to close the rent, and the pressure of the fluid in the duct is not very great. Wounds of lymphatics heal quickly, and usually discharge of lymph is prevented, and closing of the vessel is favoured, by contraction of the surrounding tissues. In the case recorded by the author of division of the thoracic duct, near its termination in the large veins of the neck, the flow of chyle was arrested, and complete cure was ultimately effected by plugging the wound made in removing the cancerous growth.

W. Johnson Smith.

Article 2683.

ALBRECHT ON THE MORTALITY AFTER RESECTION OF JOINTS, AND THE INDICATIONS FOR AND AGAINST THE OPERATION.

In the *Deutsche Zeitschrift für Chirurgie*, Band xxix., Heft 3, 4, and 5, is a long article by Dr. J. Albrecht, of Zurich, the substance of which is based on tables of 325 cases of articular disease that were treated by Professor Rose from 1867 to 1880. In 162 of these cases resection of the affected joint was practised, whilst in 165 the treatment was expectant and conservative. In the cases of resection the 'open' treatment of the wound was carried out up to 1875; and, subsequently, some antiseptic method. The Listerian method was practised in only a portion of the latter series of cases. Dr. Rose, it is stated, advocates strongly the retention of the affected limb after resection in gypsum bandages.

In his general remarks on the tabulated cases with regard to etiology and mortality, Dr. Albrecht points out that the upper extremity was affected in 91 of the 325 cases, and the lower extremity in 234 cases. The cases are arranged in three principal groups. In the first of these groups are included cases of a so-called scrofulo-tubercular character, in which the parents of the patients had presented affections of this category, such, for instance, as pulmonary phthisis, multiple caries, and suppurating glands. In the second group are arranged those cases in which the articular disease had a traumatic origin; and in the third group are collected those cases in which no decided cause of the affection could be made out; cases in which the joint-disease had come on slowly and apparently spontaneously in what seemed to have been a sound and healthy organism. In a very small and subordinate group are brought together cases of joint-disease due to several generally unrecognised causes, such as acute rheumatism, scarlatina, &c. This small group includes 11 cases, in 3 of which the elbow, in 7 the knee, and in 1 the hip were the affected joints.

The joint-disease occurred in association with scrofulosis in about one-third of the total number of cases, after injury in one-sixth, and in one-half as a result of some remote and uncertain cause. Of the 117 cases included in the first class 64 over 55 per cent. died, and only 30 per cent. recovered completely. Of the 57 traumatic cases, death occurred in 19, or 33 per cent.; 23 patients, or 40 per cent., recovered; and in the majority of the remaining cases amputation was performed. In the third and fourth groups taken together, the mortality was about 33 per cent., and the proportion of cures about one-half, 51 per cent. The mortality therefore in cases of decidedly scrofulous origin is about 22 per cent. greater than in cases of traumatic and those of apparently spontaneous origin. The same proportions are maintained in taking the joints individually, with an important exception in the case of the ankle. Of 15 cases of scrofulous disease of this joint, 11 at least were fatal, and the remaining four cases, Dr. Albrecht thinks, have probably terminated in death. These tables, it is held, prove decidedly that well-marked scrofulosis is a contra-indication of operative measures in the treatment of joint-disease.

The most frequent cause of death from disease of a large joint is tuberculosis. Next come inanition and amyloid disease, which not unfrequently are associated with tuberculosis. The percentage of deaths from tuberculosis in these tables would, Dr. Albrecht asserts, have been still higher had a careful autopsy been made in every fatal case. Patients who die from collapse after resection of the knee are usually subjects of pulmonary phthisis.

Of the 91 cases of articular disease of the upper extremity, 24, 26·3 per cent., were fatal. Of the 234 cases of disease in the lower extremity, the proportion of deaths was 47·2 per cent. The mortality, therefore, after disease of a large joint of the lower extremity is almost double that of articular disease in the upper extremity. In fungous articular disease of the arm, death from tuberculosis occurs in about 14 per cent. of the cases; in the lower extremity in about 21 per cent. Amyloid degeneration of abdominal viscera and exhaustion from prolonged and obstinate suppuration occurs more frequently after suppuration in the ankle, knee, and hip than in like affection of the joints of the upper extremity.

Dr. Albrecht, in dealing with the question of treatment, finds that, in consequence of the high percentage of deaths after resection of important joints, and the results of inquiries he has made into the subsequent course of cases of supposed and reported recovery, he has been led to oppose an early and a general resort to resection. He advocates a long perseverance in conservative treatment, and, in cases where operative measures cannot be avoided, he holds that the proceeding should be a radical one.

In considering the diseases of the different joints with regard to the questions: when ought the surgeon to resect; and how long may he persevere in conservative treatment? Dr. Albrecht states that, in the upper extremity, conservative treatment should be continued as long as possible, and, when it becomes necessary to operate, resection should in ordinary cases be preferred to amputation. Resection of the wrist presents very poor chances for recovery, when it is practised at a stage in which sinuses exist and when the fingers have become stiff. Yet it is well known that in many of these cases the fingers may regain their mo-

bility, and the patient be able to do better with his spoilt hand than with any artificial substitute. In advanced disease of the wrist, complicated by pulmonary phthisis or scrofulous disease of some other joint, there is hardly any prospect of curing the first-mentioned disease by resection; and, as the continuous suppuration from the wrist must have an unfavourable influence on the complicating lesions, amputation in the forearm is indicated. Notwithstanding the precarious state of the general health, the patient may rapidly recover, and the single object of prolonging the threatened life be thus attained. In disease of the elbow, the chances of recovery from resection are relatively high, and the dangers of the operation and the risks of secondary tuberculosis are not very great. Death after resection of the elbow occurs mostly in patients who have suffered from well-marked tuberculosis, manifesting itself in multiple caries. In such cases, there is no hope of curing the primary lesion by resection. If the patient be advanced in years, the best treatment is amputation. In disease of the shoulder-joint, exarticulation would be resorted to only in very severe cases. Moreover, resection of this joint is not an operation of great severity. The duration of the after-treatment is usually short, and the result in most instances is satisfactory. In joint-diseases of the lower extremities, the conditions are different. According to Dr. Albrecht's table, fungous disease of the ankle-joint is a condition of extreme and direct danger to life. In five only of forty-five cases treated by Billroth was complete recovery attained. Professor Rose has given up resection in dealing with caries of the ankle, and resorts usually to primary amputation. In some rare instances, as, for instance, when the patient is young and in good general health, and the joint affection is in an early stage, the whole of the disease may be removed by resection, but even in this class of cases amputation of the foot is to be preferred, as the stump left after Syme's or Pirogoff's amputation is almost always a very sound and useful one. If it be found necessary to remove the foot after an unsuccessful resection, the amputation must be performed through the leg. Resections of the hip and knee are very serious operations, and the results in successful cases of the latter operation are frequently very unsatisfactory. If the patient be very young, there is apt to be much shortening of the limb during its subsequent growth. In the third decennial period of life this evil is not to be feared, but still Albrecht holds that the prospects of complete healing after resection are very small. If the resection fail, and the after-treatment be attended with much suppuration, the patient becomes much exhausted, and is the more likely to succumb after amputation. The surgeon usually hesitates to remove a limb on which he has performed resection, and to frustrate by his own action the last chances of a permanent result. By performing resection the surgeon does not prevent the risks of tuberculosis from disease either of the hip or of the knee, as is proved by the frequency of fatal results from the general disease in subjects who before the operation had not presented any indications of the presence of tubercle in the internal organs. Albrecht holds that there are still greater objections to resection in disease of the hip. Here the operation should be performed only as a last resource in desperate cases. In disease of the hip and knee the surgeon, it is argued, should endeavour to rely on an expectant treatment. Experience teaches us, it is stated, that fistulæ in connection with a diseased hip or knee are just as likely to close after such treatment as after suppuration following resection, and the functional results in the former cases are certainly much superior. Through tuberculosis or other secondary affections a considerable number of patients will always go wrong, and these cannot be saved from their fate by conservative treatment, or by resection, or even by amputation. W. JOHNSON SMITH.

ARTICLE 2684.

ROEMER ON OVARIOTOMY IN INFANCY.

DR. ROEMER, assistant-surgeon to the Augusta Hospital, Berlin, has described, in the *Deutsche Med. Wochensch.*, Dec. 26, 1883, a case of successful ovariotomy performed on a child, aged 1 year and 8 months. At the birth of the infant, in Dec. 1881, the midwife observed that it was unusually heavy, and that its abdomen was much swollen. When the child had reached the age of 1 year and 3 months, the swelling had increased to such an extent that the parents brought it to the out-patient department of the Augusta Hospital. The abdomen was then found to be extremely distended; there was great lordosis in the lumbar region, whilst the dorsal vertebræ were strongly bent backwards. Under chloroform, the patient was more carefully examined, and a movable fluctuating tumour was detected, rather solid in its upper part above the umbilicus. Clear highly albuminous fluid escaped on exploratory puncture. The case was diagnosed as a mixed cystic tumour, probably ovarian, possibly of mesenteric origin. On examining from the rectum, a tense, uniformly smooth tumour could be felt, extending into the true pelvis, and free from the uterus. The areas of splenic and of hepatic dulness were normal. The child was free from any pulmonary, cardiac, or intestinal disease, and does not appear to have been emaciated. Paracentesis was performed, and 300 cubic centimètres of a clear yellowish albuminous fluid were drawn off, and the solid part of the tumour could then be felt as a tuberous mass, which was very freely movable.

Five days later, August 28, 1883, the infant was put under the influence of chloroform, and ovariotomy was performed under corrosive sublimate spray. An incision was made, beginning close under the umbilicus, and extending to the symphysis pubis. There could be no doubt of the nature of the tumour when it was exposed, but the incision had to be extended three centimètres above the umbilicus, owing to the size and solidity of the tumour. There was slight adhesion of the omentum. The tumour was about as large as the patient's head. The pedicle, long and thin, sprang from the right sight of the uterus, was secured by a double catgut ligature, divided, and after ligature of its vessels the edges of its peritoneal covering were sewn over the raw surface produced by division. The pedicle was then replaced in the pelvic cavity; the left ovary was examined and found to be healthy, the peritoneum cleaned with sponges, and the abdominal wound closed with silk sutures. The wound was covered with corrosive sublimate wool, and a flannel binder applied to the abdomen.

The after-treatment was very simple. The child was kept quiet, and its bowels locked by a minim of a 2 per cent. solution of morphia, injected subcu-

taneously, or a minim of tincture of opium administered as an enema. The limbs and the thorax were loosely bound down to the bed, to prevent a mischievous amount of movement. There was hardly any vomiting after operation. Cold milk and wine were given as diet. The temperature never rose above 38°·7 C. (101°·7 F.) That point was reached on the second day. On the fifth day, five minims of castor-oil were given twice, and free purgation followed. On the twelfth day all the abdominal sutures were removed; the wound had perfectly healed. The child left the hospital on Sept. 12, in excellent health.

The tumour did not involve the broad ligament, and the parovarium could be distinctly traced in that serous fold. It was fitted with masses of connective tissue, containing secondary cysts, ossifying cartilage, and cavities lined with skin, bearing thin hairs. There were also papillary masses of the kind found in dermoid cysts, rather than the extensive and semi-malignant papillomata seen in the cavities of hilum-cysts.

This case is justly alleged by Dr. Roemer to be the youngest where ovariotomy has been performed. Neville, of Dublin, operated on a patient, aged 2 years and 11 months, with fatal results within two hours (*Dublin Journal*, 1880). Busch's case (Olshausen, Pitha-Billroth's series, Vol. iv., Part 9) and Alcott's were both two years old; neither recovered. The following five were successful, but the patients were older. Schwartz's case was 4 years old (*Archiv für Gynäkologie*, Vol. xiii., 1878, p. 475); Barker's two cases were 7 years old; Knowsley Thornton's case was also 7 (*Brit. Med. Jour.*, 1881); Cupples', Chenowetts's (*American Journal of Obstetrics*, 1882), and Spencer Wells's were each 8 years old. A collection of cases of ovariotomy performed on older children will be found in an article by Dr. Chenowetts in the *American Journal of Obstetrics*, July 1882, p. 625.

[Thin-walled cysts in infantile ovaries are frequent. The reporter has found true papillomatous cystic disease within one ovary of a six months' fœtus. See *Transactions of the Pathological Society of London*, 1881.—*Rep.*] ALBAN DORAN.

SURGERY.

RECENT PAPERS.

2685. GARLAND. — Chloroform Syncope treated by Reversing. (*Brit. Med. Jour.*, April, p. 797.)

2686. DURHAM.—A Case of Neuralgia following Injury, treated by Trephining. (*Ibid.*, April, p. 667.)

2687. PICK.—A Case of Stone in the Bladder of a Female. (*Med. Times and Gazette*, April, p. 487.)

2688. DAVIES-COLLEY.—A Case of Dislocation Backwards of the First Lumbar Vertebra. (*Brit. Med. Jour.*, April, p. 666.)

2689. FARMER.—Evulsion of the Tonsils: Borelli's Operation. (*Ibid.*, March, p. 602.)

2690. THOMPSON. — Recent Improvements in the Aspirator for Lithotrity. (*Lancet*, April, p. 653.)

2691. BARKER.—On Operation for Hailux Valgus. (*Ibid.*, April, p. 655.)

2692. BROWNE.—The Air-Tampon. (*Ibid.*, April, p. 691.)

2693. GAY.—The Management of Patients during Capital Operations. (*Boston Med. Jour.*, Oct. 11, 1883.)

2694. How to Prepare Corrosive Sublimate Gauze. (*Brit. Med. Jour.*, April, p. 659.)

2695. WELLS.—Successful Removal of Two Solid Circumrenal Tumours. (*Brit. Med. Jour.*, April, p. 758.)

2696. BOTTINI. Prof.—(Thermo-galvanic Cauterisation of the Prostate. (*Lo Spallanzani*, Fasc. i. and ii., Jan. and Feb., 1884.)

2697. KNIE, A. D.—Extraction of a Foreign Body from the Œsophagus by External Œsophagotomy. (*Letopis Khirurgitcheskaho Obshtchestva v' Moskev*, No. 8, 1884, p. 291.)

2698. BUSCH.—A Preparation of Hernia Cruralis Diverticuli Intestinalis. (*Deutsche Medizinal-Zeitung*, April 24, 1884.)

ART. 2685. *Garland on Chloroform Syncope treated by Reversing.*—Mr. Garland, in the *Brit. Med. Jour.*, April 1884, p. 797, records the case of a lady, aged 41, who was to be operated upon for scirrhus of the breast. Chloroform was administered, but, the cardiac action becoming excited, a mixture of chloroform and ether was used. Soon the patient became livid, and the pulse ceased. Artificial respiration and strong stimulants proved useless. Mr. Garland then jumped on the bed, and, seizing the patient's legs, raised the body, allowing the head to touch the bed. In a few seconds the colour returned to the lips, and the pulse to the wrists. After returning to partial consciousness the patient relapsed, the pulse and respiration ceasing again. Mr. Garland again reversed, with the same result as before; but in a short time the syncope returned, and, after applying the battery without success, the patient was again reversed, this time with a satisfactory result. Two days afterwards the operation was completed without an anæsthetic. [Since Mr. Holmes in 1868 (*vide Medical Digest*, sect. 440 : 1) recommended inversion as a powerful agent in resuscitation from chloroform asphyxia, many other observers have contributed their experiences, generally in favour, but not a few being opposed to the method, and especially Drs. Watson and Silvester in the *Lancet*, May 1883, pp. 401, 861.—*Rep.*]

2686. *Durham on a Case of Neuralgia following Injury, treated by Trephining.*—Mr. Arthur Durham, in a paper read before the Clinical Society of London (*Brit. Med. Jour.*, April 1884, p. 667), reports the case of a man, aged 33, who received a wound on the forehead from the kick of a horse. The wound soon healed. Two or three months later, he was thrown out of a cart and fell upon his head. He walked home and went to bed, but suffered intense pain, extending from about the seat of the cicatrix of the old wound towards the top of the head. The pain was persistent, and reduced the patient to a most pitiable condition. All medicines and external applications failed to give relief. Half an inch of the supra-orbital nerve was excised, and both ends were forcibly pulled, but without relief; then several portions of other branches of the supra-orbital nerve were dissected out and excised, the pain remaining as bad as ever. The patient was now sure that the pain started from a spot in the bone, very nearly beneath the cicatrix of the original wound. Mr. Durham next trephined the frontal bone at the spot indicated, removing a portion of bone about one inch in diameter. From the time of the operation the patient was relieved from his pain, and made a rapid recovery, regaining his former health, and resumed his ordinary avocations. Nothing peculiar could be detected in the piece of bone removed.

2687. *Pick on a Case of Stone in the Bladder of a Female.*—Mr. Pickering Pick, in the *Med. Times and*

Gazette, April 1884, p. 487, publishes a clinical lecture on a case of stone in the bladder of a female, and to what it led. A woman, aged 25, had suffered seven years previously with a stone which was removed by lithotomy. Since that time she had never been able to retain her urine, and had undergone several operations which had all proved useless. When she came under the care of Mr. Pick, there were a vesico-vaginal and a recto-vaginal fistula. The whole of the posterior wall of the bladder appeared to be gone. The lower wall of the urethra had also been destroyed. The recto-vaginal fistula was of small size, situated about two inches from the anus. An attempt was made to close a part of the vesico-vaginal fistula, but, owing to the amount of tension, unsuccessfully. The patient was supplied with an urinal and sent out of hospital, but returned after a few weeks in a state of great misery and anxiety, and willing to submit to any treatment that would rid her of her annoyance. Accordingly, while she was under ether, and in the lithotomy position, Mr. Pick dissected up a circular belt of mucous membrane from the inner surface of the labia minora, just within the orifice of the vagina. By this means a surface, one inch in depth, was laid bare, completely round the vagina. A curved pewter tube was introduced through the recto-vaginal fistula, from the vagina, so that the end protruded out of the anal orifice. The raw surfaces were now brought together with three deep quilled sutures and five superficial silver wire sutures, so that the orifice of the vagina was completely closed. On the twelfth day after the operation, the silver sutures were removed, and the tube was also withdrawn from the rectum. The next day the patient was delighted, as she had slept all night without wetting the bed. The vagina and bladder were ordered to be syringed out daily by a catheter, introduced through the recto-vaginal opening. In a few days the patient was able to walk about and retain her urine as long as she pleased. She learnt to pass the catheter herself, and was discharged a different being, gaining strength and spirits rapidly.

2688. *Davies-Colley on a Case of Dislocation Backwards of the First Lumbar Vertebra.*—Mr. Davies-Colley, in a paper read before the Clinical Society of London (*Brit. Med. Jour.*, April 1884, p. 666), reports the case of a shipwright, aged 55, who was stooping at his work, when a mass of iron, weighing 7 cwt., fell upon the small of his back. When admitted into Guy's Hospital he was collapsed, but quite sensible. The spine of the first lumbar was three-quarters of an inch to an inch behind that of the last dorsal vertebra. There was no motility nor crepitus to be detected upon gentle manipulation. He could move his legs, but the right somewhat less than the left; there was impairment of sensation on the outer side of the right leg, and complete loss upon the dorsum of the right foot. Soon after admission the patient was placed under ether, and Mr. Davies-Colley kept his hand upon the prominence while three assistants made traction upon the legs. The projection was thus gradually reduced without any jerk. A plaster-of-Paris jacket was applied in the horizontal position, while traction was still being made upon the man's legs. A few days later it was found that the right musculo-cutaneous nerve was completely paralysed. For ten days he was unable to micturate, and small bed-sores formed over the sacrum. On the thirty-fourth day after the accident, the splint was removed. The line of the spine was then quite even. In less than two months he was able to walk, and by the help of faradisation he eventually recovered power and sensation.

2689. *Farmer on Evulsion of Tonsils: Borelli's Operation.*—Mr. C. Farmer, in the *Brit. Med. Jour.*, March 1884, p. 602, relates the case of a lady aged 28, who had suffered from relaxed sore throat, from childhood, with a foul secretion from the pharynx, and a collection of foul pus in the tonsils. The patient could feel, by the swollen glands and alteration of speech, the collection forming. All treatment, both general and local, appeared useless; the patient consented to have chloroform, and to allow Mr. Farmer to remove the tonsils. The right tonsil was easily separated from its bed by the fingers; the left, however, gave great difficulty, being closely attached to the surrounding parts, and also extended by a fringed process down the pharynx. It was hooked up with vulsellum forceps, and then cut off as deeply as possible. Convalescence was slow, but the result was most satisfactory, the patient being completely cured of an offensive disease. [This mode of removing the tonsils, which appears easy of execution, appears to be seldom adopted; for since 1862 no cases are recorded in the *Medical Digest*, sect. 829 : 4. In 1862, M. Larghi laid before the Academy of Turin a proposition to remove the tonsils by the finger alone. In 1861 M. Bernardino operated by the same method prior to Mr. G. Borelli and describes the operation as an old method revived; therefore it seems scarcely correct to designate the treatment as Borelli's operation.—*Rep.*]

2690. *Thompson on a Recent Improvement in the Aspirator for Lithotrity.*—Sir Henry Thompson, in the *Lancet*, April 1884, p. 653, records an improvement in the aspirator. It consists in a light loosely hanging valve of fine wire attached by a simple hinge to the end of the evacuating-tube, which terminates within the glass trap of the instrument. Woodcuts are given showing the action of the valve; the form of the instrument itself being made the same as the original pattern of Clover, but with the useful addition of a funnel and stopcock at the upper part of the globe, to facilitate the act of filling with water, as well as the escape of air.

2691. *Barker on an Operation for Hallux Valgus.*—Mr. A. E. Barker, in the *Lancet*, April 1884, p. 655, records a cutting operation for the deformity known as hallux valgus, where the great toe is pressed outwards by badly fitting boots. Mr. C. Hoar suggested to Mr. Barker that the condition might be relieved by osteotomy of the metatarsal bone, and straightening of the toe without interfering with the joint. The operation was performed on a lad, aged 19, who presented the deformity in question in a marked form. An incision, about an inch long, was made through the soft parts, on the inner aspect of the metatarsal bone, above its head; a small wedge-shaped piece of bone was cut out just above the head, the base of the wedge being on the inner surface of the bone, and the apex at a point nearly through to the other side. Then, by forcibly adducting the great toe, the part of the bone uncut was snapped through, thus bringing the whole member into a straight line. In this position, it was easily retained by a narrow splint along the inner border of the foot. The wound was dressed antiseptically, and the patient allowed to go home at once. The wound rapidly healed, the result being all that could be wished.

2692. *Browne on the Air-Tampon.*—Mr. Buckston Browne, in the *Lancet*, April 1884, p. 691, writes that, although his air-tampon and that designed by Messrs. Matthews Brothers are much alike, there is an essential difference between them. In Mr. Browne's, the bleeding is controlled by firm air-pressure; in theirs, more importance seems to be attached to the temporary application of cold. Two objections to this latter plan at once suggest themselves; first, the dead weight of the water in the bag is likely to prove distressing; and secondly, the advantages of the application of cold are nullified by the fact that, unless the water be frequently changed, its temperature is soon raised by the heat of the adjacent parts. Again, the instrument by Messrs. Matthews has no muslin or other envelope, a contrivance which not only prevents overdistension of the bag, but obviates the slipperiness of India-rubber in a bleeding wound.

2693. *Gay on the Management of Patients during Capital Operations.*—Dr. Gay, in the *Boston Med. Jour.*, Oct. 11, 1883, observes that his own experience has taught him that the more quickly an operation is completed, and the patient allowed to rally from the effect of the anæsthetic, the less will be the subsequent shock and exhaustion. This is especially noticeable in children. Another point mentioned is that the pain experienced in the later stages of an operation is not detrimental, and that an opiate given before the operation tends to allay suffering and produces quiet. Dr. Gay also removes the anæsthetic at a much earlier stage than is customary. Special attention should be paid to the following particulars while executing capital operations. 1. If shock or collapse be present, put nothing into the stomach, but stimulate by the skin and rectum. 2. Take pains to keep the patient warm by heaters, blankets, and a rubber sheet. 3. Disturb him as little as possible with examinations, moving, changing of clothes, dressings, &c. 4. Use the least possible quantity of the anæsthetic, and allow the patient to rally early, depending upon opiates to control subsequent pain and inquietude. 5. Finish the operation as quickly as possible.

2694. *How to Prepare Corrosive Sublimate Gauze.*—In the *Brit. Med. Jour.*, April 1884, p. 659, there appears a note describing how corrosive sublimate gauze is prepared in the New York Hospital. The gauze is immersed in a solution as follows: corrosive sublimate, 20 parts; water, 4480 parts; glycerine, 500 parts, for twelve hours; it is then wrung out, and allowed to dry, as far as the glycerine will permit. At the time of operation, a sublimate solution (1 in 1,000) is allowed to trickle slowly but nearly continuously over the incision. Bleeding vessels are tied with sublimated catgut. Metallic instruments must be immersed in a 5 per cent. solution of carbolic acid, as the bichloride will form an amalgam with them.

2695. *Wells on Successful Removal of Two Solid Circumrenal Tumours.*—Sir Spencer Wells, in the *Brit. Med. Jour.*, April 1884, p. 758, describes two specimens which have lately been added to the museum of the Royal College of Surgeons. Last November, the author removed two solid tumours from around the right and left kidneys of a lady, with part of the left kidney attached to one of the tumours. One tumour weighed 16½ lbs., the other 14½ lbs. The growths were fibro-lipomata, and therefore no recurrence need be anticipated. The patient recovered perfectly, though 48 years of age.

RICHARD NEALE, M.D.

2696. *Bottini on Thermo-cauterisation of the Prostate.*—The treatment of enlarged prostate is not satisfactory. Prof. Bottini (*Lo Spallanzani*, Fasc. i. and ii., Jan. and Feb. 1884) has obtained excellent results from the employment of the thermo-galvanic cautery; by this means the chief danger in incisions of the prostate, hæmorrhage, is avoided, and the action of the cautery can be limited to the necessary point. After trials, extending over several years, the author is now able to cauterise the prostate without hurting the bladder or the urethra, and publishes a case in which the use of his improved apparatus was entirely successful. The operation is most simple, and can be performed without difficulty.

G. D'ARCY ADAMS, M.D.

2697. *Knie on External Œsophagotomy.*—At a meeting of the Moscow Surgical Society, Dr. A. D. Knie (*Letopis Khirurgitcheskaho Obshtchestva*, No. 8, 1884) related the case of a man, aged 22, who swallowed a piece of bone during a hasty dinner, and in whom, eight days later, œsophagotomy was successfully performed after all other attempts at dislodging or extracting the foreign body had utterly failed. The swallowing of solid food became impossible; that of fluids, painful. The patient considerably lost flesh, and grew weak from insufficient nutrition, sleeplessness, and fever, and began to expectorate a fœtid purulent discharge stained with blood. A sound detected that the foreign body was impacted at the level of the manubrium sterni. On the ninth day Dr. Knie, assisted by Drs. A. Belaieff and W. Schkott, made an incision along the internal edge of the left sterno-cleido-mastoid muscle, from the cricoid cartilage down to the sternum, and found his way to the œsophagus between the cervical vessels and the larynx. While the operators were examining the gullet with the fingers, fœtid pus and mucus began to escape from the wound, thus clearly showing that a perforation already existed. The hole being enlarged, the foreign body was (with considerable difficulty) extracted by means of forceps. It proved to be a piece of bone, 3 by 2 centimètres, with four very sharp angles, and rough surfaces. Under antiseptic after-treatment, the œsophageal fistula closed on the fifteenth day, and the patient was discharged cured four weeks after the operation. After an able general discussion of cases of foreign bodies in the gullet, the author strongly insists on the necessity of energetic treatment. Touching the results from external œsophagotomy for foreign bodies, Dr. Knie estimates the recovery at about 80 per cent.—namely, of thirty-three cases collected by König in the *Deutsche Chir.*, Fasc. 35, p. 120, twenty-six were successful; to these the author adds his case and two successful cases of Monastyrsky, in the *Vratch*, No. 6, 1882, p. 91. [To the cases mentioned above the following may be added. (*a*) *Successful.*—Sonnenberg's, in the *Berliner Klin. Wochensch.*, No. 8, 1879; Krönlein's, *ib.*, No. 34; Alexander's, in the Virchow and Hirsch's *Jahresbericht*, Vol. ii., 1879, p. 403; Albertoni's, *ib.*; Bille's, in the LONDON MEDICAL RECORD, May 1881, p. 200; Lisenko and Kieber's, in the *Vratch*, No. 8, 1881, p. 133; Anton Schmidt's, *ib.*, No. 7, 1883, p. 107; Professor Ed. Lawrie's, in the *Lancet*, March 8, 1884, p. 424. (*b*) *Fatal.*—Bille's, in the LONDON MEDICAL RECORD, May 1881, p. 199; Butlin's, in the *Brit. Med. Jour.* March 22, 1884, p. 561.—*Rep.*]

V. IDELSON, M.D.

2698. *Busch on Femoral Hernia and Perforation of a Diverticulum.*—At a recent meeting of the German Surgical Congress, Dr. Busch, of Berlin, exhibited a portion of small intestine with a diverticulum, which projected from its wall about two feet and a half above the cæcum. There was a minute perforation at the root of the diverticulum. The patient was a man aged 53; he had constantly worn a truss for a reducible right femoral hernia for several years. Early in April 1884 he was seized with severe abdominal pain, and reduced the hernia himself. This manœuvre was immediately followed by acute peritonitis, great abdominal distension, and death after an enema had been passed. The peritoneal cavity was found to be filled with fæces, the hernial sac was quite empty. Dr. Busch believes that the diverticulum had occupied the sac, and that it had been pressed upon by the surrounding structures, hence the ulceration, perforation, and consequent fatal extravasation of intestinal contents that followed reduction. ALBAN DORAN.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

2699. TCHERNYSHEFF, J.—A Contribution to the Study of Pharmacology of the Active Principle of Cockroaches (*Blatta Orientalis*). (*St. Petersburg Inaugural Dissertation*, 1882, p. 146.)

2700. POPOFF, MIKHAIL L.—A Contribution to the Study of the Pharmacological Action of Kairin on the Animal System. (*Meditz. Obozr.*, Fasc. 4, 1884, pp. 406–9.)

2701. BOGOMOLOFF, T. J.—Arsenic as an Antipyretic and Antiparasitic in Relapsing Fever. (*Vratch*, 1883, No. 43, p. 674, and No. 44, pp. 694–95.)

2702. KURKINSKY, V.—Arsenic in Relapsing Fever. (*Vratch*, No. 10, 1884, p. 145.)

2703. ALEXEËFF.—On Some New Antiseptic Remedies. (*Russkaia Meditzina*, 1884, No. 9, pp. 209–11.)

2704. JOSEFOWICZ.—On Oil of Turpentine in Diphtheria. (*Gazeta Lekarska*, No. 5, 1884; and *Russkaia Meditz.*, No. 9, 1884, p. 214.)

2705. BRONIKOWSKI.—On several Cases of Diphtheria Treated by Oil of Turpentine. (*Gazeta Lekarska*, No. 5, 1884; and *Russkaia Meditz.*, No. 9, 1884, p. 214.)

2706. POPOFF, PROKOP.—On the Treatment of Cold in the Head by Cold Ablutions of the Feet. (*Russkaia Meditz.*, No. 10, 1884, pp. 234–35.)

2707. STOCQUART.—Chrysophanic Acid. (*Annales de Derm. et de Syph.*, Jan. 1884.)

2708. FENOGLIO.—Parenchymatous Injection of Splenic Tumours from Malaria. (*Spallanzani*, and *Rivista Clinica e Terap.*, March 13.)

2709. KASSOWITZ.—The Treatment of Rickets with Phosphorus. (*Archiv für Kinderheilkunde*, Band v., Heft 3).

2710. ROBERTS, F. T.—The Beneficial Effects of Convallaria. (*Practitioner*, April.)

2711. BLAIR.—Nævus treated by the Application of Liquor Arsenicalis. (*Brit. Med. Jour.*, April, p. 761.)

2712. QUINLAN.—A Local Method of Treating Phthisical Cough. (*Brit. Med. Jour.*, April, p. 664.)

2713. ARCHER.—On Kairin. (*Brit. Med. Jour.*, April, p. 711.)

2714. MUNDIE.—A Convenient Method of Applying Antipyretic Treatment. (*Brit. Med. Jour.*, April, p. 716.)

2715. Chloral Bad for Sleeplessness. (*Lancet*, April, p. 721.)

2716. Gallic Acid in Obstinate Hæmaturia. (*Lancet*, April, p. 646.)

2717. WILMOT.—The Natural Mineral Waters of Leamington. (*Med. Times and Gazette*, April, p. 489.)

2718. WILL.—The Use of Salicylic Plaster. (*Brit. Med. Jour.*, March, p. 602.)

2719. WHITE.—Ergot in Chorea. (*Lancet*, March, p. 599.)

2720. JENNINGS.—Hypodermic Injection of Morphia. (*Lancet*, March, p. 562.)

2721. NAISMITH.—The Treatment of Burns and Scalds. (*Lancet*, April, p. 690.)

2722. ROCHE.—Cantharides in Incontinence of Urine. (*Lancet*, April, p. 782.)

2723. SEATON.—Open Air Treatment by the Utilisation of the Heat of the Body. (*Lancet*, April, p. 704.)

2724. DAY.—The Treatment of Erysipelas by White Paint. (*Lancet*, April, p. 648.)

2725. KAUFMANN.—The Effects of Amorphous Digitalin. (*Revue Méd.*, No. 5, 1884.)

ART. 2699. *Tchernysheff on the Pharmacological Action of Cockroaches.*—Cockroaches have been from time immemorial used by Russian peasantry as a remedy for dropsy of every origin and kind. In 1876 Dr. Bogomoloff, at the suggestion of Professor S. P. Botkin, undertook a series of clinical observations on the action of cockroaches (which were given in the form of infusion, decoction, tincture, and powder), and arrived at the following conclusions. 1. Under the administration of *Blatta Orientalis*, the daily quantity of urine is increased. 2. The amount of albumen in urine is decreased. 3. Œdema of the limbs and face, as well as ascites, rapidly disappears. 4. The body's weight markedly falls. 5. Perspiration is mostly increased. 6. Unlike cantharides, cockroaches do not disturb the digestion, nor do they irritate the kidneys (*Arkhiv Kliniky Vnutrennykh Bolezney*, 1879–81). In 1877–79 there appeared a series of clinical papers on the same subject (by Unterberger, Fronmüller, Köhler, Vyshinsky, Pohl, Budde), embodying this general result. Of 68 cases of ascites in which *Blatta* was used, in 32 (47 per cent.) the administration was followed by more or less complete success; and in 36 (53 per cent.), by more or less complete failure. In his communication, Dr. Bogomoloff pointed out that the active principle of cockroaches is an acid. His statement being confirmed by Professor A. A. Loesch, Dr. J. Tchernysheff (*St. Petersburg Inaugural Dissertation*, 1882), following an indication of Professor P. P. Sushtchinsky, studied the chemical and physiological properties of blattic acid (*acidum blatticum*). The method of preparing blattic acid, as given by Professor Loesch, is as follows. Powdered cockroaches are digested with 70 per cent. spirit. The fluid is filtered and then evaporated to a dry residue in a water-bath. The residue is digested with diluted caustic ammonia, and the solution is shaken with fresh charcoal and treated with basic acetate of lead. The precipitate is washed with water, and then dissolved in 70 per cent. spirit. After the treatment with hydrosulphuric acid, the solution is separated from sulphide of lead by filtration, and evaporated in a water bath. The obtained light-brownish crystals are blattic acid. The acid is easily soluble in cold and hot water, in 95 per cent. alcohol, and gives soluble crystalline salts with potassium, sodium, and ammonium. The blattates of baryta, lime, copper, lead, and silver are insoluble in water, but are easily soluble in nitric acid. The physiological action of blattic acid was

examined in frogs (sixty-two experiments), and dogs (forty-eight experiments). The general results are summed up by the author as follows. 1. Blattic acid produces marked changes in the cardiac action. 2. The changes are manifested by a retardation of the pulse after small doses, and by a considerable acceleration after large doses. 3. The retardation is dependent upon stimulation of the whole inhibitory apparatus of the heart. 4. The acceleration after large doses is caused by paralysis of the inhibitory apparatus of the heart. 5. The acid lowers the arterial tension, the phenomenon being dependent upon the depression of the action of the vaso-motor centres situated in the medulla oblongata and spinal cord. 6. Death from blattic acid occurs under phenomena of paralysis of the cardiac muscle. 7. Blattic acid is a powerful diuretic. It acts by exciting the secretory elements of the kidney.

2700. *Popoff on the Action of Kairin.*—In the *Meditz. Obozr.*, Fasc. 4, 1884, p. 406, Dr. Mikhail L. Popoff communicates the results of his experiments conducted at the laboratory of Prof. P. P. Sushtchinsky in St. Petersburg. The first group of these experiments had for their object the antifermentative and antiseptic properties of kairin. It was found that an addition of kairin to urine, in the proportion of $\frac{1}{8}$ per cent., markedly inhibits its decomposition; 1 per cent. has a very strong and prolonged antiputrefactive influence. Azometric experiments show that kairin begins to act inhibitorily on the decomposition of urea, when added in proportion of $\frac{1}{7}$ per cent. In an infusion of meat (6 grammes to 20 grammes of water) containing $\frac{1}{2}$ per cent. of kairin, a putrid odour appears after a month's standing; in that containing 1 per cent. only in the fourth month (while bacteria begin to develop themselves already in two weeks). Alcoholic fermentation (as observed in 10 parts of water, with 0·1 of sugar and 0·15 of yeast) is absolutely stopped by $\frac{1}{4}$ per cent., and partially inhibited already by $\frac{1}{20}$ per cent. of kairin. The object of a second group of experiments was to examine the physiological action of the drug on frogs. On using large (one centigramme) subcutaneous doses there are observed, after a very short excitement, an apathetic, as if drowsy, state; paretic weakness of the limbs (especially of the posterior); considerable enfeeblement of pathic reflexes (in five minutes); complete prostration (in ten or fifteen minutes); retardation and increasing difficulty of the respiration, ending (in eight or ten minutes) in complete arrest; retardation of the heart's action with prolongation of diastole, incompleteness of systole, and distension of the cardiac cavities; in 1 to $1\frac{1}{2}$ hours there follows a diastolic arrest, after which, however, the animal sometimes recovers. On administering moderate (from 4 to 2 milligrammes) doses, the phenomena are similar to those enumerated above, but are weaker in degree; prostration is incomplete; pathic reflexes are gradually decreased, never reaching zero; the cardiac action becomes slower, the systole longer; the cardiac cavities are distended; sometimes a diastolic stoppage is observed; on pricking the arrested heart, a full single systole follows. Toxic doses (1 to 2 centigrammes) lead to a rapid lethal end. In a third group of experiments kairin was administered to dogs. Both large (from $1\frac{1}{2}$ to 2 centigrammes per kilogramme of weight of animal) and small doses, given through the mouth or under the skin, or injected into a vein, invariably produce retardation of respiration. Large doses lower the temperature, even in non-febrile dogs. The cardiac action is at first retarded, then accelerated (from twenty to thirty beats per minute). The blood-pressure rises slightly with the retardation of the heart, and remains at a higher level even after the occurrence of acceleration of the heart's action; then it gradually returns to the standard.

2701. *Bogomoloff on Arsenic in Relapsing Fever.*—In a preliminary note in the *Vratch*, Nos. 43 and 44, 1883, Dr. T. J. Bogomoloff describes four cases of relapsing fever in which he administered four-drop doses of Fowler's solution, internally or hypodermically, and saw—1. an enormous fall of the temperature (from 41° to 33° C., from 41°·5 to 35°·5 C., &c.) within five or six hours after the administration of the drug, the patients being bathed in perspiration; 2. the arrest of movements of spirochætes (which were invariably present in great numbers), and a rapid disappearance of the micro-organisms from the blood; and 3. a shortening of relapses.

2702. *Kurkinsky on Arsenic in Relapsing Fever.*—Having accepted Dr. Bogomoloff's invitation to try arsenic in relapsing fever, Dr. V. Kurkinsky (*Vratch*, 1884, No. 10) administered the remedy subcutaneously, in three-minim doses, in three cases of the disease, and came to the following results. 1. The temperature never decreased after the injections; on the contrary, it sometimes rose still further. 2. Spirochætes remained as numerous and as actively moving as before the injections. 3. The duration of relapses was not diminished. 4. Arsenic did not prevent relapses. The patients (all children), treated by arsenic, bore the disease worse than several other treated by baths.

2703. *Alexeëff on Tartrate of Chinoline, and Kairin.*—In the *Russkaia Meditzina*, No. 9, 1884, p. 209, Dr. Alexeëff, of Kniaginin, states his disappointment in regard to tartrate of chinoline, which he administered in several cases of intermittent fever. The remedy usually did not arrest the paroxysms, and, if arrested, they were sure to return after a short while. It was especially so in obstinate cases, and in weak anæmic patients. Kairin was administered by the author, in doses of 4, 6, and 10 grains, in six cases (acute parametritis, typhus and relapsing fever, erysipelas, and acute rheumatism); from which the following conclusions are drawn. 1. Kairin lowers the temperature even when given in small doses; in the latter case, the fall occurs about an hour after the administration. The fall of temperature is accompanied by perspiration, but never by rigors. 2. Kairin is very well borne by patients, no disagreeable symptoms being ever produced. 3. Under the kairin treatment, diseases run their natural course without any complications. 4. But the action of kairin is only fugitive, which circumstance diminishes the value of the drug in private out-patient practice. 5. Perspiration, occurring with the fall of temperature, is sometimes so profuse as to weaken the patient. Finally, the author points to the high price of the drug.

2704. *Josefowicz on Oil of Turpentine in Diphtheria.*—Like Bosse (see the London Medical Record, July 1881, p. 271), Münch and Satlow (*Ibid.*, Jan. 1884, p. 18), Dr. Josefowicz, of Kovno, thinks (*Gazeta Lekarska*, and *Russkaia Meditz.*, No. 9, 1884) highly of the treatment of diphtheria by the internal administration of oil of turpentine. He summarises his experience as follows. 1. The

internal administration of oil of turpentine produces a favourable influence on the course of diphtheria. 2. The disease takes a better turn already within a few hours after the first use of the drug. The diphtheritic deposit swells up or shrinks, but in either case easily separates itself from the surrounding tissues. 3. Relatively large doses of the oil (from one to two teaspoonfuls at a time) may be safely given. The action on the kidneys is only temporary. 4. Intestinal catarrh does not contra-indicate the use of the oil. 5. When high fever is present, the drug considerably lowers the temperature. 6. The course of the disease may be favourably influenced also by a local application of oil of turpentine.

2705. *Bronikowski on Oil of Turpentine in Diphtheria.*—Dr. Bronikowski, of Erivan, describes (*Gazeta Lekarska*, and *Russkaia Meditz.*, No. 9, 1884) five cases of diphtheria, in which he internally administered oil of turpentine. In four cases, rapid and complete recovery followed; the fifth ended in death, but in this case the drug was first employed only within a few hours before the death-agony. Generally, the author is very well satisfied with the action of the oil. It softens the diphtheritic membrane, eases its separation, and arrests the inflammatory process.

2706. *Popoff on the Treatment of Cold in the Head by Cold Ablutions of the Feet.*—In the *Russkaia Meditz.*, No. 10, 1884, p. 234, Dr. Prokop Popoff, of Minusinsk, Siberia, states that in more than 300 cases of acute and chronic rheumatic coryza he used with great success the following simple plan of treatment. Twice daily (in the morning on rising, and at night on going to bed) for two days the patients are ordered to wash their legs from the sole up to the knee with ice-cold water, and to subsequently rub the washed parts with a dry towel, or a piece of rough linen or cloth, until a vivid redness and feeling of warmth appears. The whole procedure takes not more than five minutes. No other measures or precautions are required. A striking improvement follows already on the next day; in fact, the improvement is usually so great, that many patients content themselves only with one day's treatment, regarding themselves as cured. V. IDELSON, M.D.

2707. *Stocquart on Chrysophanic Acid.*—Dr. Stocquart reports sixty-one cases treated by internal administration of chrysophanic acid (*Annales de Derm. et de Syph.*, Jan. 1884). No form of local treatment was employed. Of the sixty-one cases, fifty-six were entirely cured, and only one was unaffected by the treatment. The cases of acne, ecthyma, and impetigo, all yielded rapidly to the treatment, except one case of papulous acne. One case of pityriasis and three of urticaria were also quickly cured. In four cases of lichen and four of prurigo, the irritation was rapidly diminished, disappearing before the complete cessation of the eruption in lichen. Of thirty-two cases of eczema, thirty were cured. The author was much struck with the rapid and complete cure of acute eczema and of impetiginous eczema in children. Out of five cases of psoriasis, three were cured. The acid was generally administered in water, the bottle being well shaken before use. In ordinary doses no patient objected to it; it was also prescribed in pills. The medium dose is one centigramme a day for children, and three centigrammes for adults. In these doses it is generally well tolerated; in larger doses it may cause loss of appetite, nausea, palpitation, with præcordial distress and constriction of epigastrium, giddiness, vomiting, and cold shivers. This is an occasional occurrence only, and often much larger doses are well borne. Children tolerate the medicine well: at four weeks, he has given one, two, and in one case five centigrammes without provoking gastric irritation. Where the eruption is limited on parts ordinarily covered, and when the skin is not very thin or delicate, the external use of chrysophanic acid as ointment is indicated. Where a great extent of surface is involved, the internal use is better. Phenomena of local irritation, or erysipelas, or gastro-enteric symptoms, or nephritis, may be caused by the too free external use of the acid. Its internal use is also indicated when the eruption affects the hands or face. Where the stomach will not bear the remedy, it may be given hypodermically; but is then apt to cause pain and abscess. Its action is more rapid than when given by the mouth.

2708. *Fenoglio on Parenchymatous Injection of Splenic Tumours from Malaria.*—The author reports a case in which he injected a solution of ergotin of Bonjean in distilled water (one gramme each injection) into the substance of the spleen. The injections were made in the intervals of meals. A Pravaz's syringe was used, without local anæsthesia. Five injections were made, with an interval of twenty to thirty days. The dose varied from five to twenty centigrammes. The temperature always rose after the injection (37°·8 to 39°·4 C.), but quickly regained the normal. The spleen was markedly diminished in volume by this treatment. The hæmoglobin rose from 50 to 70, and the patient improved much in general health. G. D'ARCY ADAMS, M.D.

2709. *Kassowitz on the Treatment of Rickets, with Phosphorus.*—This paper is one of those read before the Congress of German Physicians and Naturalists at Freiburg (see *Archiv für Kinderheilkunde*, Band v., Heft 3). The author was led to this use of the drug in question by the experiments of Wegner, but before giving it to the human subject he experimented on animals. On administering very minute doses he obtained the same result as Wegner—that the compact portion was increased at the expense of the cancellous tissue, but he further ascertained that this increase was due to a shrinking of the medullary spaces, and not to fresh deposition of bony plates. On increasing the dose little by little, however, he at last came to a point where the action of the drug appeared to be reversed; for cancellous tissue was found even under the periosteum, and the medullary spaces were increased in size with the formation of numerous greatly dilated blood-vessels. Some of the animals experimented upon had previously had the sciatic nerve of one side divided, but this made no difference to the result. Consequently the drug must act through the blood, and not by nervous influence. The author began using the drug in cases of rickets in 1879. The dose for a child weighing about 12 lbs. was from $\frac{1}{60}$ to $\frac{1}{120}$ of a grain a day; the medium being either almond or cod-liver oil or oily emulsion, the dilution 1 to 100,000, and the dose of the mixture 1 to 2 teaspoonfuls daily. The total number of cases treated was 560, and each of these was under observation for at least a month. The effect of the drug was estimated by its action upon the bones of the skull; and this was so remarkable that craniotabes of a most marked character, involving both the occipital and the parietal bones, disappeared com-

pletely in from four to six weeks, and at the same time the fontanelles and sutures were reduced to normal proportions. Moreover, these effects were obtained not in one but in hundreds of cases. Laryngeal spasm was frequently present, and disappeared *pari passu* with the symptoms proper. The drug also exercised a favourable though less rapid effect upon the rachitic thorax and spine; and children four to six years old, who had never been able to stand or to sit upright, were found running about after taking phosphorus for one or two months. The majority of the children bore the drug in half milligram doses very well. [The author anticipates, and perhaps correctly, that his results will be received with incredulity; at the same time he is so positive that it becomes almost a duty to follow him. He omits to state whether the ordinary or the amorphous phosphorus was used, and he only implies that no change was made in the diet. The use of cod-liver oil as a medium involves a slight fallacy, and would be better avoided in future.—*Rep.*]

Ralph W. Leftwich, M.D.

2710. *Roberts on the Beneficial Effects of Convallaria.*—Dr. Frederick Roberts, in the *Practitioner*, April 1884, p. 265, reports a case illustrating the beneficial effects of convallaria. A man, aged 32, suffered from ascites and œdema of the legs, with irregular action of the heart. A præsystolic thrill could be felt, and a murmur heard, at the heart's apex. There was also a troublesome cough, with copious expectoration. The urine was diminished to ten ounces during the twenty-four hours; no albumen. A mixture, containing a drachm of infusion of digitalis to the dose, was ordered every four hours. This reduced the œdema of the feet, but the ascites increased, and the urine never exceeded twenty-four ounces. After some days the digitalis was discontinued, and ten minims of liquid extract of convallaria majalis ordered every four hours. The quantity of urine rapidly and steadily increased to forty-six, fifty-one, sixty, and seventy-two ounces in the twenty-four hours. The ascites also diminished. The cardiac action became more efficient, and the patient was practically well in a few days, though the signs of mitral obstructive disease remained very distinct. [*Vide* London Medical Record, 1883, pp. 121, 171.]

2711. *Blair on Nævus treated by Application of Liquor Arsenicalis.*—Dr. John Blair, in the *Brit. Med. Jour.*, April 1884, p. 761, writes that he has lately cured a large nævus of the scalp by the local application of liquor arsenicalis without causing any suffering to the patient. The treatment was continued for seven weeks, but had to be stopped on two occasions owing to severe gastric disturbance, attributed to the absorption of arsenious acid. An article by Mr. Beatty in the *Journal* (November 24, 1883) led to Dr. Blair's trial of this method of treatment. [*Vide* London Medical Record, 1884, p. 61.]

2712. *Quinlan on a Local Method of Treating Phthisical Cough.*—Dr. Quinlan, in the *Brit. Med. Jour.*, April 1884, p. 664, suggests the trial of smoking dried mullein leaves as a remedy for relieving cough in cases of phthisis. A patient under the author's care was able to keep his cough under complete control, by filling his pipe with the dried leaves of the mullein plant. This method of using mullein is mentioned in the *Philadelphia Med. and Surg. Reporter*, Feb. 1884.

2713. *Archer on Kairin.*—Mr. R. S. Archer, in the *Brit. Med. Jour.*, April 1884, p. 711, contributes a clinical note on the use of kairin. A man, aged 19, was suffering from enteric fever. The pulse was 124 and dicrotous, respiration 40, temperature 103°·3. Seven and a half grains of kairin were given in one dose, and one hour afterwards the pulse had fallen ten beats, the respiration was unaltered, and the temperature was less by more than a degree and a half; two hours after the dose the pulse was 108, dicrotism gone, respiration 32, temperature 100°·5. Another dose was now given, and by the end of another hour the pulse was 108°, respiration 30, temperature 99°·9. Shortly after this the patient had a severe rigor, the temperature running up to 105° 6; a dose of 7½ grains was given, and within a quarter of an hour the temperature fell nearly one degree; it continued falling for about an hour after the dose, then steadily rose, but fell again soon after administering a dose of the drug. The patient continued to have rigors, with sharp rises of temperature, for some thirty-six hours; then he died, with a temperature of 105°, having taken about 144 grains of kairin. Mr. Archer quotes some rules laid down by Dr. Filehne for the administration of kairin. 'It is advisable to begin with eight-grain doses every hour for four doses, but to cease when the temperature is 100° F. If the temperature be not above 100° F., four grains should be given every hour until the temperature is again perceptibly rising, when the former dose of eight grains should be again given. If eight grains per hour for four doses be not sufficient, then it should be raised to twelve or sixteen grains for two or three doses. The urine which is passed during the administration of kairin possesses a blackish-green colour.' [As kairin is a new antipyretic of undoubted value, it may be of interest to note the papers that have appeared in some of the medical journals. The *Brit. Med. Jour.*, Dec. 1883, p. 1124; Jan. 1884, pp. 69, 250, 313; *Lancet*, Oct. 1883, p. 552; London Medical Record, 1884, p. 116.—*Rep.*]

2714. *Mundie on a Convenient Method of Applying Antipyretic Treatment.*—Dr. Mundie, in the *Brit. Med. Jour.*, April 1884, p. 716, records notes of two cases in which he had recourse to a method which obviated the difficulty of the use of a cold bath. A married woman was suffering from pyrexia complicated with erysipelas. The author placed his patient on a Hooper's bed filled with iced water, placing a single blanket between the patient and the bed. The result was that in six hours the temperature fell from 106° to 104° F., and the patient ultimately made a good recovery.

2715. *Chloral Bad for Sleeplessness.*—In the *Lancet*, April 1884, p. 721, an article appears condemning the use of chloral or bromide of potassium as a cure for sleeplessness. The recourse to chloral and bromide is precisely the same thing as a recourse to alcohol; the essential elements of the nerve-tissue are blighted by the stupefying poison, as by alcohol in habitual drunkenness. The man or woman who is sent to 'sleep' by either of these narcotics is simply *intoxicated*. Persistence in recourse to them has no better excuse than unwillingness to take the trouble to search out the cause of the 'wakefulness' which prevents natural sleep.

2716. *Gallic Acid in Obstinate Hæmaturia.*—In the *Lancet*, April 1884, p. 646, a case is reported of obstinate hæmaturia cured by large doses of gallic acid. The patient, a lad aged 18, received a blow on the right lumbar region, which caused pain and

swelling for a few weeks, when the urine became loaded with blood. The bleeding continued for some months, and nothing seemed to arrest it. At one time, it being supposed there might be a calculus, an operation was suggested, but the parents refused. The author then saw him, and treated the case with sulphuric acid and sulphate of iron, then with ergot and perchloride of iron, but nothing controlled the hæmorrhage. Gallic acid was then given in ten-grain doses, and continued for a couple of weeks. Under the advice of Dr. Lionel Beale, the dose of gallic acid was increased to thirty grains every four hours, then every three hours. The stomach retained these large doses with comfort, and in a month's time the urine flowed free from a trace of blood. [In the *Lancet*, p. 466, Dr. Beale has an instructive paper upon the specific value of gallic acid in all hæmorrhages from the urinary organs.—*Rep.*]

2717. *Wilmot on the Natural Mineral Waters of Leamington.*—Mr. Eardley Wilmot, in the *Med. Times and Gazette*, April 1884, p. 489, writes that, although there has been a general revival of opinion in favour of several mineral springs in England, yet one has been left out in this revival, viz., the Royal Leamington Spa. The properties of this spring are mainly said to be due to the great amount of chloride of calcium contained in the water, there being twenty grains to the pint. This proves most beneficial in cases of glandular enlargements, scrofulous diseases, &c. From May till October is the season most adapted for its use, and great improvements are being carried out by the Corporation of Leamington, so that the mineral waters of this well-known town may once again stand in the front rank of the spas of England. (*See* HOLIDAY NUMBER OF THE LONDON MEDICAL RECORD for June 2, page 42.)

2718. *Will on the Use of Salicylic Plaster.*—Dr. Ogilvie Will, in the *Brit. Med. Jour.*, March 1884, p. 602, records a case of thickened epidermis of the foot, cured by the use of Beiersdorf's salicylic plaster. A man came to Dr. Will, suffering from a peculiar affection of the dorsum of the left foot. The whole anterior half of the foot was brown, rough, and warty looking, and not unlike hippopotamus hide. The patient stated that the disease had lasted two months, and was spreading. The affected part was strapped with strips of the plaster obtained from Hamburg, and was left untouched for three weeks; and, on removing it, it was found a cure had resulted.

2719. *White on the Use of Ergot in Chorea.*—Mr. R. W. White, in the *Lancet*, March 1884, p. 599, records a case of chorea in which the use of ergot was adopted. A girl, aged 10 years, suffered from chorea. Two minims of the solution of arsenic were given three times a day for nine days without improvement. Then ten minims of the liquid extract of ergot were given three times a day; the result being that in three or four days there was a marked improvement, and in a fortnight the child was well. [*Vide* LONDON MEDICAL RECORD, p. 165.]

2720. *Jennings on the Subcutaneous Injection of Morphia.*—Mr. C. E. Jennings, in the *Lancet*, March 1884, p. 562, draws attention to the frequent complaints made by medical men in general practice, that a hypodermic injection of morphia produced prompt emesis. This, the author points out, is due to the morphia being kept in solution for some weeks and thereby becoming decomposed into apomorphia, the formula of which differs from that of morphia in containing one molecule less of water. The condition of the syringe plays also a very important part in the success of a hypodermic injection; and to obviate any failure of the piston and the grease necessary to make it act well, the author suggests the adoption of a suitable pipette, a drawing of which is given. This consists of a graduated glass tube armed at one end with the needle, and at the other with an elastic cap; by driving out the air the syringe is easily charged and the fluid readily injected by compression of the cap, its action being similar to the pipettes used for eye-drops.

2721. *Naismith on the Treatment of Burns and Scalds.*—Mr. Naismith, in the *Lancet*, April 1884, p. 690, recommends the following treatment of burns and scalds. Place the injured member in ice-cold water, keeping it there till all pain has disappeared; two to four hours or longer. When the limb will bear removal from the water without pain, a thick layer of lead acetate and resin ointment is laid on, and the limb enveloped in cotton-wadding. This ointment (℥j. to ℥j.) is very useful also in erysipelas. By this treatment, pain and shock are reduced to a minimum, opiates are seldom required, and danger to life is greatly averted.

2722. *Roche on Cantharides in Incontinence of Urine.*—Dr. Roche, in the *Lancet*, April 1884, p. 782, states that five drops of tincture of cantharides, three times a day, is a good remedy for children suffering from incontinence of urine. It renders the neck of the bladder sensitive, and the stimulus of the urine keeps the sphincter tonically closed till voluntarily overcome at micturition time. In children, want of tonic contraction in the sphincter, and not excessive sensitiveness and spasmodic effort in the body of the bladder, is the most frequent cause of nocturnal enuresis.

2723. *Seaton on Open Air Treatment by the Utilisation of the Heat of the Body for the Purposes of Inhalation and Respiration.*—Dr. Joscelyn Seaton, in the *Lancet*, April 1884, p. 704, represents an apparatus which utilises the normal heat of the human body for the purpose of supplying warmed and partially dried air (medicated or otherwise) to the respiratory passages. The apparatus consists of a broad belt of perforated chamois leather, or fine flannel, resembling an ordinary 'cholera' or 'rheumatism' belt, containing from four to ten India-rubber tubes, made continuous by angular joints of metal, or vulcanite, in the form of what is known as the 'Grecian key pattern.' The air, entering at the free extremity, passes through the entire length (10 to 15 feet) to a vulcanite box, resembling a small hunting watch, containing a sponge saturated with the prescribed medicament, and thence is conveyed to the respiratory organs by a double-valved naso-oral face-piece. By connecting the apparatus through means of a tube with the outer air, a patient may breathe pure air all day and night, and so carry out to perfection the method known as open-air treatment, which is so powerful a therapeutic agent (*vide Medical Digest*, sect. 257 : 2). The construction of the apparatus is confided to Messrs. Maw, Son, & Thompson.

2724. *Day on Treatment of Erysipelas by White Lead.*—Mr. E. O. Day, in the *Lancet*, April 1884, p. 648, gives his formula for the use of white lead varnish in erysipelas. Take half a pound of white lead, and thoroughly mix with mastic varnish to the consistency of a thick paste. Take forty grains of sul-

phate of copper, forty grains of sulphate of zinc, and forty grains of acetate of lead; rub them together in a mortar till they form a thick paste: this they do in about five minutes. Then mix these two pastes thoroughly together. Add about an ounce of linseed-oil, so as to make the compound of the consistency of paint. The varnish causes the paint to crack, so as to be easily removed. The lead acts as the body of the compound. The sulphates and acetate act as rapid driers to the linseed-oil.

RICHARD NEALE, M.D.

2725. *Kaufmann on the Effects of Amorphous Digitalin.*—Numerous experiments made in Chauveau's laboratory have led the author to the following conclusions (*Revue de Méd.*, No. 5, 1884). Locally, digitalin acts as an irritant. Small doses, given internally or injected into the veins, cause a diminution in the frequency of the pulse; after large doses, this diminution is followed by a period of acceleration, due to paralysis of the bulbar and intracardiac moderator centres. Digitalin increases the blood-pressure and the energy of the cardiac contractions, but diminishes the velocity of the flow of blood in the arteries. The rectal temperature sinks below normal, and the quantity of urine is diminished in healthy animals.

J. S. KAESER, M.D.

PATHOLOGY.

RECENT PAPERS.

2726. SÉE AND MATHIEU.—Atonic Dilatation of the Stomach. (*Revue de Méd.*, No. 5, 1884.)

2727. PLUSHTCHEVSKY.—A Contribution to the Study of Morbid Anatomy of the Muscles of the Skeleton, and of the Diaphragm in Typhus. (*Voenno-Meditz. Jurnal*, Jan. 1884, pp. 1–32; and Feb., pp. 33–56.)

2728. GAUDELIN, E. P.—On Micrococci in Dysentery. (*Proceedings of the Caucasian Medical Society*, 1884, No. 17, pp. 530–35.)

2729. VARGUNIN, V. A.—On Staining Lower Organisms. (*Vratch*, No. 11, 1883, p. 192.)

2730. CACCIOLA, PROF. S.—A Case of Addison's Disease. (*Gazz. Med. Ital. Prov. Venete*, April 12, 1884.)

2731. LUSSANA, PROF. F.—On the Transmission and Modifications of the Hydrophobic Virus. (*Gazz. Med. Ital. Prov. Venete*, April 19, 26, May 3, 1884.)

2732. STOKER.—Black Tongue. (*Brit. Med. Jour.*, March, p. 601.)

ART. 2726. *Sée and Mathieu on Atonic Dilatation of the Stomach.*—According to the authors (*Revue de Méd.*, No. 5, 1884) dilatation of the stomach is frequently caused by pyloric obstruction or by interstitial cirrhosis and fatty degeneration of its coats, especially in drunkards; sometimes the dilatation appears to be caused by paralysis of the stomach in consequence of some injury. Most cases, however, are observed in neurasthenic patients suffering alternately from spasm and atony of the stomach and intestine. Depressing moral influences and bad alimentation are the most frequent occasional causes, but constipation and flatulency also seem to play an important part in the pathogeny of the disease. J. S. KAESER, M.D.

2727. *Plushtchevsky on Morbid Changes in the Muscular System in Typhus.*—Dr. T. Plushtchevsky, working under the guidance of Professor N. P. Ivanovsky, microscopically examined (*Voenno-Meditz. Jurnal*, Jan. and Feb. 1884) the muscles in 13 cases of enteric fever, in 2 of typhus, and in 4 of relapsing fever. The specimens were in each case taken from the following muscles: the diaphragm, biceps of the arm, superficial common flexor of the fingers, abdominal rectus, one of the femoral adductors, and one of the muscles of the calf (usually the gastrocnemius). The results at which he arrived are these. 1. In all the typhous forms, the muscles are affected with granular degeneration, the change being most manifest in typhus, less so in relapsing fever, and still less in enteric. 2. There are observed, also, swelling and proliferation of muscular nuclei, without any change in the striated character of the contractile substance. These nuclear alterations are most pronounced in relapsing fever, and less so in typhus and typhoid. 3. There is observed pigmentation of the contractile substance in almost all muscles; it is constant and most marked in the diaphragm. Pigmentary deposits are met both in the otherwise normal muscles and in the muscles with proliferation of the nuclei. 4. There occur swelling and proliferation of the oval and spindle-shaped cells in the internal perimysium. 5. The vessels present swelling and granular degeneration of the epithelioid lining; in relapsing fever and typhus, there is met, also, proliferation of the nuclei; the muscular coat shows only swelling of its nuclei. 6. In seven cases of enteric fever, there was present hyaline degeneration of the contractile substance, and necrosis of muscular fibres ('*Coagulations-nekrose*' of Cohnheim). The necrosis was invariably met in the diaphragm, adductors, and abdominal rectus. 7. In two cases of enteric fever, there was present, also, hyaline degeneration of the capillaries and of the median coat of the small arteries. 8. In four cases of enteric fever, the axis-cylinders of the peripheric nerves, situated between the primary muscular bundles, presented varicose spindle-shaped swellings, and a slight degree of granular change. In one of the cases of relapsing fever, there was found disintegration of the axis-cylinders.

2728. *Gaudelin on Micrococci in Dysentery.*—At a recent meeting of the Caucasian Medical Society, Dr. E. P. Gaudelin, of Tiflis (*Proceedings of the Caucasian Medical Society*, No. 17, 1884) demonstrated micrococci and bacilli found by him in the large bowel and liver in two fatal cases of dysentery. In the intestine the micrococci, which were present in an enormous quantity, lay in masses on the surface of the mucous membrane, as well as infiltrated all the coats of the bowel. They were especially numerous in the walls and lumina of the veins of the submucous layer, and in the muscles of the latter. In the liver, micrococci filled the capillaries and the branches of the vena portæ. Rods were found only in the bowel, in its mucous and submucous layers, especially in the necrotic tissues Dr. Prior (*Centralbl. für Klin. Med.*, No. 17, 1883 also, found micrococci and bacilli (similar to bacillus subtilis) in the excrements, as well as in the intestinal lymphatic vessels in dysenteric patients. Neither Prior nor Gaudelin has made any culture and inoculation experiments.

2729. *Vargunin on Staining Lower Organisms.*—In a preliminary note in the *Vratch*, No. 11, 1884, p. 192, Dr. V. A. Vargunin states that psorospermiæ (gregarinæ) behave with aniline colours exactly like the bacilli of tuberculosis and leprosy. [About a year ago, Dr. Petri proved the same for common mucor; see the LONDON MEDICAL RECORD, March

1884, p. 106.—*Rep.*] When staining after the method of Balmer and Fraentzel, the author saw that some gregarinæ appeared red, some blue, and others remained uncoloured. When Koch's plan was used, there again were found blue, brown, and colourless specimens lying over the same microscopic field. Only the contents of psorospermiæ always took in the colouring matter, the membrane invariably remaining unstained. The author thinks that bacteria may present a similar behaviour in regard to stains; that is, given a certain kind of bacteria, some of the specimens will well retain the colouring matter, and others not. In view of the fact that newly formed osseous tissue, and tissues infiltrated with lime-salts, are stained by aniline dyes, like rods of tuberculosis and leprosy, and gregarinæ, Dr. Vargunin is inclined to believe that the characteristic colouring reaction of the lower organisms depends upon their containing lime-salts. V. IDELSON, M.D.

2730. *Cacciola on a Case of Addison's Disease.*—Giuseppe Ceccato, aged 25, with good history, a year and a half before his death, noticed that his skin was becoming brown. He began to feel an unwonted weakness, suffered often from giddiness and headache, with loss of appetite, and at times from slight attacks of fever. He was admitted in June 1882, and on July 9 following was discharged much better. During the time he was in the hospital, in the first four days his temperature oscillated between 38° and 39°·2 C. On Dec. 4, 1882, he was again admitted at 11.30 A.M. He was then shivering violently, was perfectly conscious, and the temperature 39° C. A little later the shivering ceased, and the patient was tranquil until 2 P.M., when he became suddenly delirious (gay and lascivious). This was followed by tonic convulsions and involuntary emission of urine. The pupils were widely dilated, and little, if at all, acting to light. This convulsive state lasted to the evening. At 2 A.M. he died. The results of the necropsy are given in great detail. Briefly they consisted of (1) complete destruction of the suprarenal capsules, which were substituted by chronic inflammatory products, in great part caseified and calcified; (2) engorgement of the lymphatic and laminated follicles of the intestinal mucous membrane; (3) deposit of yellow or black pigment in different organs, especially in the mucous tissue of the mouth and in the cutis. In the mucous membrane of the mouth and in the cutis, besides the pigmental deposit, there was infiltration of the superficial layers of the dermis with small cells. There was no lesion of the ganglia or sympathetic nerves, and, more than this, the sympathetic nerves remained perfectly normal in the midst of the chronic inflammatory products which destroyed the suprarenal capsules. Elaborate search was made for bacilli (30 or 40 sections a day for a month were examined by all the different methods of coloration), but without success. The author mentions that under certain conditions he found that the little globules of fat became coloured just like Koch's bacilli when Weigert's process was used. The semilunar ganglia and solar plexus, cervical and lumbar ganglia, were all found to be perfectly normal. The branches of the sympathetic nerve were also free from any alteration. This case clearly shows that Addison's disease may depend on diseases of the suprarenal capsules without alterations of the sympathetic.

2731. *Lussana on the Transmission and Modification of the Hydrophobic Virus.*—The materies morbi is a virus, analogous to that of carbuncle, small-pox, or syphilis. Like all virus, it is reproducible and multiplies in the organism, like the micro-organism of carbuncle, &c., and has the stages of sowing, evolution, reproduction, and extinction. There are the classic form, acute and fatal, *neuroso-asphytic*, and the secondary subchronic form, *lypemaniacal*, after the poison has passed through various dogs or through the organism of animals of another kind, or man. In this last case, it is no longer inoculable. The hydrophobic virus acts more in the manner of diphtheritic virus than as the virus of carbuncle. In hydrophobia, diphtheria, and cholera, the micro-organisms are most fatal in the initial stage of development; in carbuncle they are much less fatal in the first stage, and most poisonous in the stage of complete filamentous development (Pasteur). They are of extreme subtlety. They have not yet been seen by the microscope, and pass through ordinary filters, like the germs of syphilis and small-pox. The organised germ resists in blood dried in the air, saline solution, and filtration. It dies with the hydrophobic animal. The vehicle of the virus is naturally the saliva, the nerve-substance also, the blood much less. The bronchial mucus (P. Bert), the blood, and much more the nerve-substance, may serve for the transmission of the virus. The liquid part only seems to convey the virus, since alkaline solution and filtration does not remove the infective action. According to Galtier and Pasteur, the cerebro-spinal fluid also is the vehicle of the virus. It is more active when absorbed by the lymphatics than when injected into the blood-vessels. Its phases of inoculation and development are much slower and longer than that of all other virus—20 to 30 days, often months. The cases of precocious development within two or three days are probably not hydrophobia at all, but septicæmia (Pasteur). Hydrophobia is not transmissible from man to man. There is a subacute lypemaniacal form, not fatal, with no symptoms of asphyxia or of laryngo-pharyngeal spasm. The animal is dull, morose, seeks the darkness, has muscular tremors, and signs of paresis of jaw and lower limbs; it eats and drinks. Inoculation from an animal so affected may cause the acute form. This form may occur exceptionally in man. The virus passing through the human organism loses all or nearly all its virulence. Inoculated in dogs or rabbits it is inert, and produces the subacute form only, but then with the same stage of incubation and other characteristic symptoms of hydrophobia. The virus is destroyed by successive transmission even in dogs, soon becomes attenuated, and ceases to be virulent. Capello maintained that it lost its contagiosity at the second transmission. It is more destructible than any other virus; it dies with the animal. It also loses its virulence in passing through the organism of herbivorous animals and birds. It is not transmitted by the alimentary canal. Pasteur's recent researches confirm those of Professor Lussana (*Acad. de Méd.*, Feb. 24, 1884).

G. D'ARCY ADAMS, M.D.

2732. *Stoker on Black Tongue.*—Mr. G. Stoker, in the *Brit. Med. Jour.*, March 1884, p. 601, writes, that as far as he is aware, black tongue has not been seen in England, though it has been described several times by French writers. The author has a case under observation, in a man aged 70, a painter by trade, but who has not worked at his trade for five years. About three years ago, a small ellipse of black commenced in the centre of the tongue, which has gradually spread, until the whole organ is black

from base to apex. On microscopical examination, scrapings are seen to be made up of greatly hypertrophied epithelial fringes, evidently detached from the fungiform papillæ. These fringes are seen to be formed of imbricated epithelial scales, stained of a deep brown colour, but no pigment granules can be detected. At times the blackness has almost disappeared, and has again returned. [Cases are recorded in the *British and Foreign Med.-Chir. Rev.*, July 1856, p. 247, and a very exhaustive lecture on the subject by Mr. Jonathan Hutchinson may be consulted in the *Medical Press and Circular*, July 1883, p. 20.—*Rep.*] RICHARD NEALE, M.D.

PHYSIOLOGY.

RECENT PAPERS.

2733. SHUMOVA, EKATERINA.—A Contribution to the Study of the Physiological Action of Camphor. (*Ejened. Klin Gazeta*, No. 12, 1883, pp. 177–83, and No. 13, pp. 201–3.)

2734. NETCHAIEFF, A.—On the Depressing Action of Atropia, Morphia, Chloral, and Stimulation of the Sensory Nerves on the Secretion of Gastric Juice. (Botkin's *Arkhiv Klin. Vnutren. Bolezney*, Vol. vii., 1883, p. 325.)

2735. ANREP, PROFESSOR V. K.—On the Action of some Pharmacological Agents on the Secretion of Gastric Juice. (*Vratch*, 1882, No. 34, pp. 559–62.)

2736. BEKHTEREFF, V.—On the Functions of the Olivary Bodies of the Medulla Oblongata. (*Vratch*, 1882, Nos. 34, pp. 566–67; and 35, pp. 586–8.)

2737. RODZAJEWSKI, D. K.—On the Influence of Introduction of Food into the Stomach on the Temperature of the Body generally, and on the Temperature of the Stomach in Particular. (*Voenno-Meditz. Jurnal*, May 1882, pp. 115–22; June, pp. 163–82; July, pp. 273–80; August, pp. 281–8; September, pp. 237–44; October, pp. 87–94; and December, pp. 260–80.)

2738. ROSENSTEIN, J.—On the Influence of the Temperature of Baths on the Reflex Excitability. (*Proceedings of the Odessa Balneological Society*, 1881–83, Fasc. 2, pp. 72–75.)

2739. HERMANN.—The Time Occupied by the Blood in the Completion of a Circuit.

2740. MITCHELL.—Secretion of Milk in the Male. (*Brit. Med. Jour.*, March 1884, p. 493.)

ART. 2733. *Shumova on the Physiological Action of Camphor.*—Following a suggestion made to her by Professor S. P. Botkin, Dr. Ekaterina Shumova (*Ejened. Klin. Gazeta*, Nos. 12 and 13, 1883) undertook experiments on the action of camphor on frogs, dogs, and rabbits, and arrived at the following results. 1. *In frogs.*—*a.* Small subcutaneous doses (under 8 milligrammes, suspended in oil) produce an increase in frequency of the cardiac beats, which lasts from twenty-five to eighty minutes. Larger doses (from a centigramme to one-fifth of a gramme) give rise at first to a very transient (eight to twenty minutes') increase in energy of the action of the heart, and then to irregularity of rhythm, with diastolic intermissions, and to a gradual retardation up to the full stoppage, the latter occurring in one and a half to eight hours since the introduction of camphor. Camphor acts mainly on the excito-motor apparatus of the heart, but possibly also on the inhibitory cardiac centre. *b.* The arterial blood-pressure under small doses does not present any decided alterations. From larger doses (0·2 to 0·1 gramme) it is very rapidly (in three to five minutes, that is, before any retardation of the heart's action has occurred) and considerably lowered. Microscopic examination of the interdigital membrane displays a rapid retardation of blood-current, with dilatation of the vessels. Camphor affects chiefly the vaso-motor centres, though it exerts some action on the vascular walls themselves. *c.* Reflex action rapidly falls under the influence of larger doses; the small ones do not possess any constant action. Excitability of motor nerves is decreased but slightly; and even this decrease may be observed only during the last stage, after reflexes have disappeared. Striated muscles preserve their contractility up to the animal's death. From all this it may be concluded, that the changes in reflex action depend chiefly upon an affection of reflex centres in the spinal cord. 2. *In dogs.*—The administration of doses under one gramme gives rise to considerable general excitement, occurring in ten to fifteen minutes after the introduction of the camphor under the skin or by the mouth. In half an hour there appear a slight transient inco-ordination of movements, unsteady oscillating gait, then laziness, apathy, and drowsiness, accompanied by general tremor and occasional starting. In two and a half to three hours, the animal returns to its normal condition. Larger doses (2 grammes) produce, in about forty minutes, epileptoid convulsions with arrest of respiration, and vomiting. The fits last from one and a half to three minutes, and return sometimes every three or five minutes. On the introduction of camphor into the stomach, the rectal temperature falls 0·6 to 0·8 C.; then, in about two or two and a half hours, it rises above the normal, and remains at a high level for one or two days. [An explanation of this elevation of temperature Dr. Shumova finds in gastric inflammation caused by camphor.] The frequency of the heart's action is usually increased; at the same time the heart at first works more regularly, more rhythmically; later, its contractions become weaker and irregular. Manometric examination shows a reduction in the size of the pulse-waves, the number of which does not coincide with the number of cardiac contractions. When administered subcutaneously, camphor gives rise to an increase of the blood-pressure, followed by a decrease. When inhaled, it brings about only a fall of arterial tension, without any preceding rise. Respiration is at first accelerated, then retarded; sometimes Cheyne-Stokes' phenomenon may be observed. 3. *In rabbits.*—Large subcutaneous doses (above 1·5 grammes) produce the state of general excitement, followed by epileptoid fits. Small doses exert rather a narcotising influence. The temperature falls (sometimes 1° C. in four hours, after 1·2 grammes). The heart's action and respiration in the beginning are increased in frequency, but afterwards a retardation follows. The arterial blood-pressure gradually falls.

2734. *Netchaieff on the Action of Atropia, Morphia, Chloral, and Nerve-Stimulation on the Secretion of Gastric Juice.*—Dr. A. Netchaieff (Botkin's *Arkhiv Klin. Vnutren. Bolezney*, Vol. vii., 1883), having carried out a series of experiments on dogs in Professor S. P. Botkin's laboratory, found that subcutaneous injections of atropia and morphia, intravenous injections of chloral, and electrical stimulation of the central ends of the divided pneumogastric, crural, and sciatic nerves, produce an inhibitory action on the secretion of gastric juice. In regard to morphia, there was observed by the author an

increase in the secretion during the first or initial period of its action; but this stage was very short, and was quickly followed by that of decrease and almost complete stoppage of the secretion. As to the ways in which the phenomena are brought about, the author admits that atropia and stimulation of sensory nerves produce a depressing effect on the secretory nerves of gastric glands. The inhibitory action of morphia in the second stage probably depends on an enfeeblement of the motor and vaso-motor centres in the brain (after their preceding excitement during the first stage), in consequence of which the blood-pressure falls and the motory and reflex activities decrease; it is possible, also, that morphia directly depresses the secretory activity of the gastric glands and the functions of the secretory nerves. The inhibitory action of chloral depends on the fall of blood-pressure in consequence of depression of the vaso-motor centre, and dilatation of peripheric vessels. Another feature, which is common to all the agents under consideration, consists in their weakening action on the muscular activity of the stomach, leading to a further interference with the digestion which is already disturbed by a scanty flow of gastric juice.

2735. *Anrep on the Action of some Drugs on the Secretion of Gastric Juice.*—In an introductory note in the *Vratch*, 1882, No. 34, p. 559, Professor V. K. Anrep, of St. Petersburg, publishes the results of his prolonged (three years') careful investigations, which had been conducted partly in Professor Ludwig's laboratory in Leipzig; partly in ProfessorT. P.Tarkhanoff's at St. Petersburg. The experiments were made on large-sized dogs with a gastric fistula. To prevent any admixture of saliva and œsophageal mucus with the gastric juice, as well as any passage of the latter into the duodenum, the author used two plugs, one of which was introduced into the cardiac, and the other into the pyloric opening. (The method of establishing a fistula in the stomach, and of isolating the latter, is fully described in the author's article 'On Absorption from the Stomach,' in the *Vratch*, 1880, No. 46, p. 751.) The author investigated the action on the gastric secretion of the following drugs: atropia, morphia, pilocarpine, nicotine, quinine, aconitia, digitaline, bromide of potassium, chloride of potassium, and chloride of sodium. *Atropia.*—Even small subcutaneous doses (1 milligramme) produce a marked inhibition of the secretion, which follows in from ten to fifteen minutes; its duration, however, is short. Larger doses (2 to 5 milligrammes) entirely suppress the secretion, the stoppage lasting from one to two hours. The secretion is re-established, not at once, but only very gradually. During the period of arrest, mechanical stimulation of the mucous membrane of the stomach (which normally gives rise to an abundant flow of gastric juice) remains without any effect. *Morphia.*—In cases where there appears no vomiting or retching, a subcutaneous injection of 8 milligrammes brings about a marked decrease (to the extent of from 25 to 50 per cent.) in the secretion, lasting from three to four hours. An injection of 4 or 5 centigrammes leads to a complete stoppage; but with the appearance of vomiting the secretion returns, being sometimes more abundant than before the poisoning. Arrest of the flow may be produced also by repetition (after a few hours) of a small dose. Mechanical irritation during the period of diminution of the secretion is always followed by a temporary increase in the flow of juice. *Pilocarpin.*—Even very small hypodermic doses (4 to 6 milligrammes) produce, in five or ten minutes, a considerable increase in the secretion (from 50 to 300 per cent.), lasting for about an hour; then the flow decreases, and even falls, for a short period (from half to three-fourths of an hour) below the standard. In two or three hours the effects of the drug disappear entirely. Larger doses (15 milligrammes to 3 centigrammes) act similarly, but more strongly. The collected gastric juice, as to its acidity and digestive properties, does not differ in any way from the normal. [In the *Memorie dell' Academia delle Scienze dell' Istituto di Bologna*, Ser. 4, Vol. ii., Fasc. 3, Dr. L. Vella states the same in regard to the action of pilocarpin on the secretion of enteric juice.] *Nicotine.*—In hypodermic doses of one-twentieth to one-fifth of a minim, this alkaloid increases the flow of gastric juice, but less considerably (not more than 70 per cent.) than pilocarpin, the increase seldom lasting longer than twenty minutes. *Quinine.*—In subcutaneous doses of one centigramme to half a gramme, it does not produce any influence whatever on the secretion. One-gramme doses, and repeated smaller ones, diminish the flow of gastric juice. *Aconitia and Digitalin.*—Only small doses were tried. They did not exercise any influence on the gastric secretion. *Bromide of Potassium.*—Half-gramme doses, given in enemata, have no influence. After doses of from 0·7 to 1·2 grammes the secretion is diminished, but less considerably and less constantly than after atropia and morphia. *Chlorides of Sodium and Potassium* act identically: being introduced into the system in the form of enemata, they exercise no influence; but, when introduced directly into the stomach, through the fistula, in the form of powder, they very quickly give rise to a slight transitory increase in the secretion, lasting from seven to twelve minutes. Each new portion of the powder produces a fresh increase in the flow of gastric juice.

2736. *Bekhtereff on the Functions of the Olivary Bodies of the Medulla Oblongata.*—Professor V. Bekhtereff, of St. Petersburg (*Vratch*, 1882, Nos. 34 and 35), on destroying the olivary bodies in dogs, saw the following phenomena. 1. Various *forced movements* occurred, and, when the lesion inflicted was considerable, usually took the form of rotation round the longitudinal axis of the body towards the side of the lesion. They were accompanied by nystagmus in both eyes, and by a characteristic deviation of these organs, one eye being deviated downwards and inwards, the other upwards and outwards. When the lesion was less considerable, the forced movements consisted either in running forwards, or in a circular walking, or in staggering backwards. 2. Peculiar *forced postures* were assumed. The animal, when resting, or permanently, lies on the side corresponding to the lesion, or it hurdles, the concavity of the curvature of the body being on the healthy side. 3. There are *disturbances in the equilibration* of the body; these, when both of the olivary bodies are injured, consist in a strong staggering from side to side, or in a complete inability to stand and walk. When only one of the olivary bodies is destroyed, the animal manifests the tendency of falling on the side of the lesion. From the data given above, the author draws the conclusion that the olivary bodies, like the semicircular canals of the ear, and the grey matter around the funnel-shaped region in the third ventricle [see the author's experiments in the *Ejened. Klin. Gazeta*, 1882, Nos. 7, 8, and 11; and in the *St. Petersburg Med. Wochensch.*, 1882, No. 12], stand

in an intimate connection with the cerebellum. As the olivary bodies are connected with the posterior columns of the spinal cord on one side, and with the cerebellum on the other, they possibly are an organ which in a reflex way transmits the centripetal (tortile) impulses from the periphery of the body to the cerebellum, that is, to the centre presiding over the equilibration of the body.

2737. *Rodzajewski on the Influence of taking Food on the Temperature of the Stomach and the Body generally.*—Dr. D. K. Rodzajewski, of Kieff (*Voenno-Meditz. Jurnal*, May-December 1882), bases his views on the study of the literature of the question, but chiefly on numerous observations of his own which were made on a patient with gastric fistula, in whom Dr. A. S. Tatzenko had about a year previously performed gastrostomy on the account of impermeable stricture of the œsophagus (from swallowing sulphuric acid). The fistula was situated on the linea alba, 8 centimètres from the ensiform process, and 6 from the navel. The feeding of the patient through the fistula went on quite satisfactorily. The temperature-measurements were taken simultaneously in the stomach, rectum, and axilla. The author sums up the results of his researches as follows. 1. Like any other part of the digestive tract, the stomach obeys the general laws of the daily systemic production of heat. 2. But its temperature presents extensive deviations from the standard determined by those laws. 3. The extent and duration of the variations, tending, in general, to lowering the temperature of the stomach, depend on the time of day and on the temperature of the food introduced. 4. Rapidity and completeness of compensation of those changes which occur in the temperature of the stomach under the influence of the introduction of food, stand in very close connection with the state of excitability of the nervous system at the given time of day. 5. The stomach, like the skin, is one of the most important regulators of the heat of the body. 6. Besides local changes in the temperature of the stomach, the food taken produces a general effect on the vascular system of the whole body by changing the blood-pressure and the topographic distribution of the blood. 7. As results of the latter change, there appear variations of the temperature of the surface of the body, corresponding to the temperature of the food introduced. 8. Variations of respiration and pulse during the first hour after the introduction of food stand in an inverse relation to the behaviour of the temperature in the stomach. Maxima of pulsation and respiration are observed during the first hour after taking food. 9. The temperature of the stomach during digestion is lower than that in the rectum, but higher than in the axilla. 10. The duration of normal digestion depends on the part of day at which the food is taken, and on the properties of the latter.

2738. *Rosenstein on the Influence of Temperature of Baths on Reflex Excitability.*—Dr. J. Rosenstein, conjointly with Dr. Motchutkovsky (*Proceedings of the Odessa Balneological Society*, Fasc 2, 1881–83) carried out a series of observations to learn whether the action of water on the cutaneous surface of the body changes the reflex excitability of the spinal cord. The temperature of the baths varied from 16° to 30° Reaum. (from 68° to 99°·5 F.). The action both of sweet and of salt water was studied. The authors arrived at the following results. 1. Baths at a temperature below 20° Reaum. (78° F.) increase, and those at a temperature above 25° Reaum. (88°·2 F.) decrease the reflex excitability. 2. The least changes of the latter are observed at the temperatures between 20° Reaum. (78° F.) and 25° Reaum. (88°·2 F.). 3. The addition of chloride of sodium to a bath at a higher temperature prevents the usual fall of reflex excitability. 4. But a strong concentration of salt water may elevate reflex excitability above the standard.

V. Idelson, M.D.

2739. *Hermann on the Time occupied by the Blood in the Completion of a Circuit.*—The author publishes a modification of Edward Hering's method for estimating the time occupied in the circulation of the blood, whereby he has made it applicable to such small animals as are most commonly employed in physiological laboratories. On the clock cylinder of a Balthazar's kymograph, 16 centimètres in diameter, is stretched a piece of good blotting-paper, which must be free from all traces of iron. In the peripheral end of a cut vein a glass cannula is fixed so that its orifice is close against the paper, without, however, grazing it. The blood, as it flows out through the cannula, flows on to the paper of the rotating cylinder, making on it a red streak, which will be thicker according to the larger size of the animal and the slowness of rotation of the cylinder. The rapidity of rotation is arranged so that one revolution of the cylinder is sufficient for the experiment; that is to say, that the injected salt shall appear in the blood-stream before the completion of a revolution of the cylinder. The injection must be made as quickly, and the injected solution must be as concentrated, as possible. The author recommends ferrocyanide of sodium in preference to ferrocyanide of potassium, the latter being more likely to stop the action of the heart. For rabbits, 5 cubic centimètres of a 10 per cent. solution were quickly injected into the central end of the jugular vein. At the beginning and end of the injection, an assistant makes a lead-pencil mark on the rotating paper opposite the mouth of the cannula. When the circuit is complete, the paper is taken off the cylinder and hung up to dry. The time occupied in a revolution being known, a measure is laid upon the dried blood-track, and this is measured off into centimètres by a lead-pencil closely drawn through it. The pieces so measured off are separated and numbered. Each piece is then folded up and put separately into a test-tube with a little distilled water, whereby the soluble matters are dissolved. The fluid is then poured into another test tube, a drop of dilute chloride of iron is dropped in, and it is then acidulated with a drop of hydrochloric acid. The first appearance of the ferrocyanide in the blood-stream can thus be determined with great accuracy. The method would be of good service in other investigations. Paul M. Chapman, M.D.

2740. *Mitchell on Secretion of Milk in the Male.*—Mr. Mitchell, in the *Brit. Med. Jour.*, March 1884, p. 493, relates that on Jan. 16, he delivered a woman of a healthy male child. Two days afterwards her husband, a thin and sickly-looking man, complained of shooting pains in the breasts, with severe headache and nausea. On Jan. 19 milk began to flow freely from the breasts, and continued to be secreted until the 23rd; then it diminished, and on Jan. 26 no traces were to be found. [An interesting series of cases of lactation occurring in old men and women, in virgins and in neonati, may be consulted in section 1599 : 2 of the *Medical Digest.—Rep.*] Richard Neale, M.D.

DISEASES OF CHILDREN.

RECENT PAPERS.

2741. DÖRING.—Simultaneous Scarlatina and Variola. (*Berlin Klin. Wochensch.*, Oct. 22, 1883.)

2742. WORMS.—General Emphysema in a Child. (*Deutsche Med. Wochensch.*, Feb. 7.)

2743. CHEADLE.—Infantile Scurvy. (*Lancet*, Feb. 1884, p. 371.)

2744. LAKE.—Infantile Scurvy. (*Lancet*, March, p. 553.)

2745. WEST.—Multiple Hepatic Abscess treated by Incision. (*Brit. Med. Jour.*, March, p. 560.)

2746. BYAM.—Recurrence of Measles. (*Lancet*, March, p. 545.)

2747. OWEN.—A Case of Perforating Ulcer of the Foot in a Child. (*Lancet*, April, p. 611.)

2748. ASHBY.—Pericarditis in Children. (*Lancet*, March, p. 559.)

2749. GORE.—A Case of Congenital Epulis. (*Brit. Med. Jour.*, April, p. 664.)

2750. GATCHKOVSKY, G. J.—Hot Water as a Means for the Resuscitation of Stillborn Infants. (*Russkaia Meditz.*, No. 10, 1884, pp. 233-34.)

ART. 2741. *Döring on Simultaneous Scarlatina and Variola.*—Dr. Döring, of Limbach, communicates to the *Berlin. Klin. Wochensch.* of Oct. 22, 1883, a case of simultaneous scarlatina and variola which occurred in the hospital there. A little girl, aged 6, was admitted on March 28, with a well-marked scarlatinal eruption. She began to complain of sore throat on March 25, and the fever appeared on the following day. The scarlatina ran its normal course, defervescence occurring on April 1, and desquamation began soon after. The child had never been vaccinated. On April 4 the temperature rose again, and on the morning of the 6th, small papules began to be felt under the skin, which went on, with a temperature of over 104° F., to a well-marked outbreak of variola. It might appear, at first sight, as if the small-pox had been contracted in hospital, and had appeared after an incubation of only eight days; but, as two sisters and one brother were subsequently admitted suffering from it, it is more than likely that the infection occurred at home.

2742. *Worms on a Case of General Emphysema in a Child.*—At a meeting of the Berlin Medical Society on Jan. 30 (*Deutsche Med. Wochensch.*, Feb. 7), Dr. Worms showed a patient, a girl aged 7, with general emphysema of the skin over the whole trunk, giving the well-known crackling feeling of half-frozen snow. In the neighbourhood of the right pectoralis major was a spot which felt like an air-cushion. Severe dyspnœa was present, with distress and increased frequency of the pulse. The child had suffered from chronic bronchial catarrh for five years; eight days before being shown she had complained of pain in the skin, and on the following day she had suffered much from severe vomiting. The swelling was first noticed on the evening of Jan. 25. Dr. Worms thought that the vomiting must be held responsible for the emphysema.

ALICE KER, M.D.

2743. *Cheadle on Infantile Scurvy.*—Dr. Cheadle, in the *Lancet*, Feb. 1884, p. 371, writes to correct a statement in the *Lancet*, p. 299, where he is made to say, 'I have seen a case of infantile scurvy recover completely under the exclusive use of Swiss milk.' What Dr. Cheadle did say was the exact opposite—that he had recently seen a case of scurvy in a child fed exclusively on Swiss milk, and that the scorbutic condition quickly disappeared on an antiscorbutic diet of fresh milk, raw meat, and potato pulp. [This case confirms the observations of many writers that Swiss milk as an article of diet is about as undesirable a form of food as can be administered to infants. The new 'First Swiss' brand of unsweetened milk removes, however, most of the objections raised to the use of condensed milk.—*Rep.*]

2744. *Lake on Infantile Scurvy.*—Mr. Lake, in the *Lancet*, March 1884, p. 553, records a case of infantile scurvy. A child, aged one year, was brought to see Mr. Lake; the mother stated that for seven months the child seemed very healthy, but since he seemed to be in pain whenever the legs were moved or touched. Up to the age of three months the child was nursed by his mother; since then, it had been brought up entirely on Nestle's milk-food. There was very great anæmia, and the legs were both swollen from the upper third of the tibia downwards. The skin of both was tense and shiny. In the skin over the sternum were several hæmorrhagic spots. The gums round the upper incisors were swollen, spongy, rounded at the edges, bleeding at the slightest touch. The child rapidly improved on a diet of fresh cow's milk, the juice of raw meat, potatoes and gravy, with small quantities of cod-liver oil, and the juice of an orange daily. In less than three weeks it was moving its limbs about free from pain, the swelling had all disappeared, and it seemed quite lively.

2745. *West on a Case of Multiple Hepatic Abscess in a Boy, treated by Incision.*—Dr. Samuel West, in a paper read before the Clinical Society of London (*Brit. Med. Jour.*, March 1884, p. 560), gives notes of the case of a Jewish lad, aged 11, who had never been out of London. On Jan. 21 the patient had a rigor, and pain in the right hypochondrium. On Feb. 20 he was brought to hospital with evident hepatic abscess, and a temperature of 105°. On Feb. 23 a large abscess was aspirated. Four days later, a free incision was made, letting out seven and a half ounces of turbid purulent fluid; a second abscess was discovered and aspirated. On March 6 the last two swellings were again prominent, and were freely laid open, a drainage-tube being inserted. On April 9 a fresh abscess was found, explored, and freely laid open. From this time convalescence commenced, interrupted only by a diffuse abscess in the abdominal wall, which healed alone on being opened and washed out. A discussion followed, in which Dr. Mahomed considered that two distinct classes of cases had been confused in the discussion, viz., large local abscesses and simple multiple abscesses, the latter a much more dangerous form, and having pyæmic tendencies. Dr. West's case probably fell under the last category.

2746. *Byam on the Recurrence of Measles.*—Mr. Byam, in the *Lancet*, March 1884, p. 545, gives particulars of a case of the recurrence of measles. A boy, aged 9, had all the characteristic symptoms of the exanthem on Dec. 14; on Jan. 18 he went into the country, returning home on Feb. 5. He was put into the same room which he had occupied during his illness. This room had been thoroughly cleansed, and disinfected. On Feb. 24, nineteen days after his return home, he complained of not feeling well, and on Feb. 29 the characteristic rash of measles, with the suffused eyes, coryza, and bronchial catarrh, were well developed. [Somewhat

similar cases are recorded in the *Medical Digest*, section 75 : 2.—*Rep.*]

2747. *Owen on a Case of Perforating Ulcer of the Foot in a Child.*—Mr. Edmund Owen, in the *Lancet*, April 1884, p. 611, notes a case of perforating ulcer in a girl, aged 11, situated deeply in the sole of the left foot. The sore was almost as wide as the foot, and nearly as long in the antero-posterior measurement as it was from side to side. The adjoining skin was thickly crusted with horny discoloured scales of epidermis. Remarking on the case, Mr. Owen says that many cases of perforating ulcer of the foot have been reported, occurring in adult males. In the adult female but few cases have been observed. The ulcer in this child was evidently secondary to degeneration of nerve-tissue ; and from the absence or impairment of the patellar reflex on the two sides, there must have been some degeneration in the spinal cord.

2748. *Ashby on Pericarditis in Children.*—Dr. Ashby, in the *Lancet*, March 1884, pp. 559, 610, contributes an article on pericarditis in children. It is often overlooked in infancy, and is considered rare. It may take place in children under two years of age from the following causes : as the result of a septicæmic condition in newly born children, following phlebitis or absorption of putrid matter from the umbilical cord ; it also sometimes follows suppurative periostitis and osteitis in young children. It occurs also in infants in connection with a tuberculosis of serous membranes. Of much more practical importance is the pericarditis which is either idiopathic, or is associated with a simple pleurisy, empyema, or pleuro-pneumonia, and which gives rise to effusion, generally purulent. Two cases of purulent pericardial effusion in young children are detailed. Pericarditis, occurring in children over three to four years of age, is more frequently rheumatic in origin than due to any other cause. Text-books state that pericarditis is apt to follow some of the zymotic diseases, especially scarlet fever, but the author considers it rare. Endocarditis occasionally follows acute scarlatinal nephritis, while pericarditis is rare, the commonest cardiac lesion being acute dilatation. The author goes on to consider the effects of the extension of pericarditis beyond the pericardium, involving the pleural surfaces of the anterior edges of the lungs, the mediastinal glands, and other organs in the immediate neighbourhood, producing a condition of things to which the name of mediastino-pericarditis has been given. In some of these cases a peculiar condition of pulse—the pulsus paradoxus —can be detected. It is not certain where or in what organ the mediastinitis commences ; and more observations are wanted upon this curious class of cases, before it is possible to throw much light on the etiology and pathology of what is at present a dark corner of practical medicine.

2749. *Gore on a Case of Congenital Epulis.*—Dr Albert A. Gore, in the *Brit. Med. Jour.*, April 1884, p. 664, records the case of a child being born with its mouth filled by a bluish-red tumour, which projected between the lips, and was firmly adherent to the lower gum immediately to the right of the mesial line. Dr. Gore, three days after the child's birth, passed a double carbolised silk ligature from within outwards through the middle of the tumour, tying it tightly from each side. The tumour came away in two days. Ten days later a second smaller growth to the right of the first was treated in a similar manner. RICHARD NEALE, M.D.

2750. *Gatchkovsky on the Treatment of Still-born Infants by Hot Water.*—In the *Russkaia Meditz.*, No. 10, 1884, p. 233, Dr. G. J. Gatchkovsky, of Rybinsk, details two cases of asphyxia of the newly born, in which, about twenty minutes after the child's birth, he used a very hot bath with most immediate success. Pointing to as successful cases of Goyard, Rusanovsky (the LONDON MEDICAL RECORD, May 1882, p. 199), and Rodzewicz (*ib.*, Dec. 1883, p. 521), the author wonders why so simple, easy, and brilliant a method as that under consideration (bequeathed to science by Dr. Le Bon) does not find a more extensive application which is fully deserved by it. He, with Professor Rossbach, seeks the explanation of this strange fact in the inclination, very common in mankind, not to appreciate those boons which are cheap and easily accessible to everybody.

V. IDELSON, M.D.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

2751. MIERZEJEWSKI, PROFS. J. P., AND ERLICKI, A. F.—Sclerosis Lateralis Amyotrophica. (*Vestnik Klin. ee Sudeb. Psychiatriee*, 1883, Vol. i., p. 68, with 7 figs.)

2752. LION, M. E.—On the Treatment of Epilepsy by Ball's Method. (*Arkhiv Psych.*, &c., 1883, Vol. i., Fasc. 1, pp. 19–32.)

2753. DANILLO, S.—Encephalitis Corticalis Circumscripta Chronica. (*Vestnik Klin. ee Sudeb. Psych.*, 1883, Vol. i., pp. 125–27.)

2754. GAJKIEWICZ, W.—On a Case of Acute Ascending Paralysis ; Recovery. (*Gazeta Lekarska*, and *Vestnik Klin. ee Sudeb. Psychiatriee*, Vol. i., p. 266, 1883.)

2755. GAJKIEWICZ, W.—A Case of Spasmodic Spinal Paralysis, ending in Recovery. (*Gazeta Lekarska*, and *Vestnik Klin. ee Sudeb. Psychiatriee*, Vol. i., p. 265, 1883.)

2756. MENDEL.—Paralytic Dementia in Dogs. (*Sitzungsberichte König. Preuss. Acad. der Wiss. zu Berlin.*)

2757. LIPSBURGER.—Subcutaneous Injection of Perosmic Acid in Neuralgia. (*Centralbl. für. die Gesam. Therap.*, March 1884.)

2758. KOLLMANN.—Saltatory Spasms. (*Deutsche Med. Wochensch.*, Jan. 24 and Feb. 7.)

2759. MUSSO.—Irregularities of the Pupil in the Insane. (*Lo Sperimentale*, Dec. 1, 1883.)

2760. TAMBURINI AND RIVA.—Researches on the Pathological Anatomy of General Paralysis in Relation to Cerebral Localisation. (*Riv. Sper. di Fren. e di Med. Leg.* Fasc. iv., 1883.)

2761. MARCHI.—The Pathological Histology of General Paralysis. (*Ibid.*)

2762. SANTINI.—Pathogenesis of Chorea. (*Riv. Sper. di Fren.*, Fasc. iv., 1883.)

2763. COTARD.—Loss of Visual Memory in a Melancholia. (*Le Progrès Méd.*, 1884.)

2764. FRANÇOIS.—Gummata of the Brain. (*Revue de Thérap.*, No. 6, 1884.)

2765. LUYS.—Movements of the Brain. (*L'Union Méd.*, No. 45, 1884.)

2766. FREDERICQ.—Experiments on Respiratory Innervation.

2767. GAIRDNER.—Lethargic Stupor or Trance. (*Lancet*, Jan. 1884, pp. 5 and 56.)

2768. STEVENSON.—Neuralgia of the Sciatic Nerve successfully treated by Galvanism. (*Lancet*, Jan. 1884, p. 105.)

2769. HARKIN.—The Medulla Oblongata in its Relations with Sexual Disorders. (*Practitioner*, Feb. 1884.)

2770. BUZZARD.—The Treatment of Partial Epilepsy by Encircling Blisters. (*Lancet*, March, p. 373.)

2771. SEWILL.—Spasm of the Muscles of the Face and Cataract due to Dental Irritation. (*Brit. Med. Jour.*, April, p. 669.)

2772. CANTLIE.—Nerve-Stretching and Coiled Nerve-Fibres. (*Bristol Med. Chir. Jour.*)

2773. ROBSON.—A Case of Reflex Paralysis. (*Lancet*, April, p. 659.)

2774. HAMMOND.—Miryachit. (*Brit. Med. Jour.*, April, p. 758.)

ART. 2751. *Mierzejewski and Erlicki on Amyotrophic Lateral Sclerosis.*—In the *Vestnik Klin. ee Sudeb. Psychiatriee*, 1883, Vol. i., p. 68, Professors J. P. Mierzejewski and A. F. Erlicki give an elaborated account of a case of amyotrophic lateral sclerosis, and describe in detail the morbid changes found in the nervous centres at the necropsy. When first seen by the authors, the patient, a woman, aged 33, presented the following symptoms. There were strongly pronounced paresis of all four extremities; considerable atrophy of their muscles, especially of the interosseous and extensors, the lower extremities being more wasted than the upper; well-marked rigidity almost in all muscles of the body, and true contractions of the flexors of the feet, fingers, and wrists; a strong exaggeration of the tendon-reflexes of the quadriceps femoris, of the calf-muscles, and biceps on both sides; decrease of faradic and galvanic contractility of the wasted muscles; paresis and great atrophy of the tongue, with utter indistinctness of speech; slight difficulty in swallowing; mental 'irritable weakness' (easy emotions); no alterations in sensibility; no troubles of the bladder or rectum; no fever. From the somewhat imperfect previous history of the patient, it was elicited only that the affection had begun to gradually develop itself about a year ago, and that about two years before she had had several epileptoid fits, each of which had been followed by a short temporary disturbance of speech. The patient died about two years after she came under the authors' observation. The *post mortem* examination showed the following changes. (*a*) *In the spinal cord:* general thickening of the pia mater; sclerosis of the lateral columns, especially of their pyramidal bundles, from the filum terminale up to the pyramidal decussation; parenchymatous and interstitial inflammation of the anterior grey horns, especially pronounced in both enlargements, and more so in the dorsal region than in the cervical; accumulation of products of granulary disintegration, and enormous dilatation of the thickened blood-vessels in the inflamed regions of grey matter; great thickening of the endoneurium of the anterior rootlets, with disappearance of many of their nerve-fibres. (*b*) *In the medulla oblongata:* sclerosis of the nerve-bundles of the upper (*i.e.* motor) crossing of the pyramids; parenchymatous and interstitial inflammation of the hypoglossus nucleus (especially in its median part or Duval's 'classical nucleus'), with dilatation of the blood-vessels and thickening of their walls. (*c*) *In the brain:* a sarcoma, of the size of a walnut, growing from the pia mater in the region of the left first frontal gyrus, near the fissura longitudinalis, three centimètres in front of the sulcus præcentralis. The tumour was not adherent to the brain-substance, though caused a slight indentation in it. Otherwise, the brain presented nothing abnormal.

2752. *Lion on the Treatment of Epilepsy after Ball's Method.*—In the *Arkhiv Psych.*, 1883, Vol. i., Fasc. 1, p. 18) Dr. M. E. Lion, house-physician of the Kishinev Lunatic Asylum, details his experience in the treatment of epilepsy after the method which was recommended by Professor Ball, of Paris, and which consists in the simultaneous administration of the bromides with oxide of zinc and belladonna. The formulæ, as given by Ball, are these. 1. Bromide of ammonium and bromide of sodium, of each 10 grammes to 300 of water; to begin with four tablespoonfuls daily in an infusion of valerian, and, if necessary, to increase to eight or ten table-spoonfuls. 2. Extract of belladonna and oxide of zinc, of each one gramme, made up into forty pills; to take two pills daily, one in the morning and one in the evening. The results at which Dr. Lion arrived are as follows. 1. Under this treatment, epileptic fits in many cases disappear altogether. 2. In the remaining cases, the frequency and intensity of the fits are greatly diminished. 3. No harm whatever is observed even from a prolonged treatment by maximal doses. Moreover, if there have been any unpleasant symptoms from the preceding treatment by bromide of potassium, they disappear under Ball's treatment. 4. The treatment must be persevered upon for a considerable stretch of time, otherwise a relapse will follow, and in an aggravated degree. 5. In cases where the introduction of the drugs through the mouth is impossible, they are to be given through the rectum. [The articles referring to the subject may be found in the LONDON MEDICAL RECORD, 1882, June, p. 226 (Ball); the *Lancet*, 1882, Oct. 7, p. 603 (O. Jennings); and in *L'Encéphale*, 1881, No. 1, p. 90 (Boyé), and No. 3, p. 425 (Fusier).]

2753. *Danillo on Encephalitis Corticalis Circumscripta Chronica.*—In a preliminary note in the *Vestnik Klin. ee Sudeb. Psych.*, 1883, Vol. i., p. 125) Dr. S. Danillo gives the results of histological examination of the brain from a woman, aged 22, who died at Professor Charcot's clinic, and who presented convulsions strictly limited to the left extremities, and conjugated with deviation of the head and eyeballs to the left. The convulsions occurred in her since five years of age, coming yearly in periods varying from six weeks to four months. After every fit there remained a temporary paresis of both left extremities, and slight paresis of the right facial nerve. During the fits consciousness was invariably preserved; but the temperature rose to 38°·5, and even 39°·3 C. At the *post mortem* examination there were found slight meningitic changes on the brain-convexity, chiefly over the right frontal lobe; also a considerable difference in weight of the hemispheres (the right, 675 grammes; the left, 547 grammes), and paleness of the gyri. The streak of grey matter between the first and second right frontal gyri was considerably hypertrophied, while the remaining parts of the brain and cord presented nothing abnormal. Microscopic examination of the hypertrophied district of the grey matter showed opaque swelling of nerve-cells in all the cortical layers, loss of their pigmentation, intumescence of their nuclei, disappearance of the latter with vacuolisation of the protoplasm, thickening and pigmentation of the walls of the vessels with proliferation of their nuclei; finally, proliferation of the nuclei of the neuroglia, and presence of 'spider-like' elements.

In short, the case was one of sharply circumscribed parenchymatous and interstitial inflammatory process in the cortex.

2754. *Gajkiewicz on Recovery from Acute Ascending Paralysis.*—Dr. W. Gajkiewicz (*Gazeta Lekarska*, and *Vestnik Klin. ee Sudeb. Psychiatriee*, Vol. i., 1883) details the following case. The patient, aged 50, a moderate drinker, of a healthy family, began without any visible reason to feel weakness in both lower extremities, which in a few days ended in complete paralysis. Nine days later, all four extremities, as well as respiratory (intercostal) muscles, were paralysed. The tendon-reflexes were absent. Cutaneous sensibility, sphincters, deglutition, speech, temperature, and intelligence, remained normal. The treatment consisted in the application of galvanic current to the vertebral column, in warm baths, and in the administration of iodide of potassium, from one to two drachms daily. The patient remained in his deplorable condition about a week; then a gradual improvement began to show itself, and by the end of three months (after the first symptoms) he was quite well. [Similar cases by Rumpf and Hunnius were published in the London Medical Record, January 1884, p. 38.—*Rep.*]

2755. *Gajkiewicz on a Case of Recovery from Spasmodic Spinal Paralysis.*—Dr. W. Gajkiewicz (*Gazeta Lekarska*, and *Vestnik Klin. ee Sudeb. Psychiatriee*, Vol. i., 1883) details a case of affection termed by Erb spasmodic spinal paralysis, and by Charcot *tabes dorsal spasmodique*. Soon after exposure to cold, the patient noticed a weakness in his legs, which, in about three weeks, increased to a complete inability to walk. On his admission into the hospital three months later, there were present complete paralysis of the lower extremities, muscular rigidity and contraction, strong adduction of the thighs (it was impossible to separate them by force, or to put the hand between the knees), great exaggeration of the tendon-reflexes in both legs, clonic contractions ('spinal epilepsy') on testing the tendon-reflexes and on using faradic current. Sensibility, the vaso-motor and trophic functions, as well as the action of the bladder and rectum, remained normal. The treatment consisted at first in the application of continuous current to the spine, and in the use of warm baths; afterwards, in cauterisation once monthly by means of a Paquelin's thermo-cautery, which was applied to the dorsal and lumbar regions of the spine. After six cauterisations, each of which was followed by a new marked improvement, the patient left, cured. [Cases of spastic spinal paralysis may be found in the London Medical Record, June 1881, p. 244 (Morgan); July, p. 281 (Strümpell); March, p. 105 (Friedenreich); October 1883, p. 441 (Weiss).—*Rep.*]

V. Idelson, M.D.

2756. *Mendel on Paralytic Dementia in Dogs.*—His investigations into the progressive paralysis of the insane have led Dr. Mendel (*Sitzungsberichte der König. Preuss. Acad. der Wiss. zu Berlin*, 1884) to the conclusion that a twofold condition is required for its production; on the one hand a certain morbid change in the walls of the vessels, permitting the escape of white blood-corpuscles and plasma; and, on the other hand, active hyperæmia of the vessels of the cortex cerebri, allowing the passage of the white corpuscles into the cerebral substance. The elements of blood thus transferred become the starting-point of further changes, proliferation of the cells of the neuroglia and connective tissue, and, lastly, atrophy of the nervous structures. If these conclusions be correct, there appears to be no reason, if the same condition can be produced in lower animals, why the progressive paralysis and attendant pathological changes should not be produced in the cerebral cortex. Further, the same condition may be induced without the vascular lesions, if only a more powerful cause of hyperæmia be brought to bear upon the walls of the vessels in their normal state. For this purpose, dogs were so fastened to a table as to excite active hyperæmia by the more or less rapid rotation of the table. If the rotation were sufficiently rapid and long-continued (for from twenty-five to thirty minutes, with from 120 to 130 turns to the minute), hyperæmia of the bones of the cranium, the membranes and cortex of the brain, with bloodlessness and œdema of the white substance, were induced by the centrifugal movement. Besides these appearances, there were seen scattered on the integuments and cortex numerous points of extravasated blood, especially in the region of the sulcus cruciatus. If, however, the centrifugal motion were less rapid (100 to 110 revolutions in from four to six minutes), when the rotation was stopped there were observed only the ordinary signs of vertigo. By repeating the operation for from twelve to fourteen days, three or four times daily, there was induced a loss of muscular power, first in one posterior limb, soon to be followed by the same in the other extremity. When these symptoms were confirmed, the rotations were discontinued, and the animal was simply well fed. In the course of a few weeks the affection of the posterior limbs became augmented, with extension of the same to the fore legs. Progression became difficult, and lastly impossible. Then ensued paresis of the muscles of the trunk, facial paralysis, an altered bark, and difficult micturition. In the second week a state of apathy had supervened, gradually deepening into a state resembling idiocy. The body lost weight; at the same time the appetite did not fail. Death took place with symptoms of a general (or diffused?) paralysis. Dr. Mendel, comparing the affection here described with the progressive paralysis and hebetude to be met with in the insane of the human race, concludes that the pathological condition is the same, and considers that the results of dissection confirm this view. Thus he found adhesion of the dura mater to the skull, of the dura mater with the pia mater, thickening of the pia mater in the tract of the vessels, especially in the sulcus cruciatus and adjacent convolutions. The microscope showed proliferation of the nuclei of the neuroglia and connective tissue, and here and there morbid conditions of the nerve-cells. These lesions were most abundant in the sulcus cruciatus, the fissure of Sylvius, and in the circumjacent convolutions, corresponding with the localisation of the symptoms. Other organs presented nothing abnormal. Hence Dr. Mendel infers that active hyperæmia is the essential condition for the production of the disease, since, if the heads of the dogs were fixed in the centre of the rotating table, no ill effects ensued. [There may be some question as to how far the affection of the brain, here described, can be said to correspond with the 'general paralysis' of the insane among men.—*Rep.*]

W. B. Kesteven, M.D.

2757. *Lipsburger on Subcutaneous Injection of Perosmic Acid in Neuralgia.*— Dr. Lipsburger, assistant to Professor Nicoladoni in Innsbrück, writes to the *Centralbl. für die Gesam. Therap.*, March 1884, on the subcutaneous injection of

perosmic acid in peripheral neuralgia. In one case which came under his notice, neuralgia of the fifth nerve had existed for nearly nine years, during which time the supra-orbital and infra-orbital nerves had been resected once and the inferior dental twice, the second time in its canal; but the pain always returned after a short interval. In October 1883 the patient (a woman, aged 49) came under Dr. Lipsburger's observation, suffering from intense neuralgia, coming on in paroxysms fifty to one hundred times a day, in the region of the supra-orbital nerve. Subcutaneous injection of perosmic acid was ordered, and a half-syringeful of a 1 per cent. solution was injected into the frontal region once a day. On the first day the patient had fifty attacks, on the second three, and on the following days one each day until the fifth, when they ceased altogether. A relapse followed in four days, and eight attacks occurred in the next seven days; after which the treatment had to be discontinued, as a portion of the skin of the forehead became discoloured and subsequently sloughed. Another relapse in the inferior dental region was soon cured, the skin in the neighbourhood of the injections also becoming greenish like that of the forehead, but not proceeding to slough; and the patient left the hospital in less than two months, free from pain. The injection shows itself as worthy of further trial in suitable cases; but it is evident that the first beginning of discoloration of the skin must be the sign to discontinue the treatment for a time, even at the risk of a temporary return of the pain, and it is probable that the injections ought to be less frequent than in the case quoted.

2758. *Kollmann on Saltatory Spasms.*—In the *Deutsche Med. Wochensch.* of Jan. 24 and Feb. 7, Dr. Kollmann, of Wurzburg, continues his account of the case of saltatory spasms which he began in the same journal of Oct. 3, 1883 (see LONDON MEDICAL RECORD, Jan. 15, 1884). The treatment consisted in the application of ice and the administration of morphia, with pancreatin for the sake of the appetite. The saltatory spasms diminished gradually, to be succeeded by hyperæsthesia of the soles of the feet, and a feeling as if needles were being stuck into them. On August 14 the patient found, to her delight, that she could stand and walk a little, although some trembling was still perceptible in the lower extremities. Percussion of the thorax induced reflex twitching on both sides; the lung-disease went on progressing. Examination of the eyes showed nothing abnormal, and the vaginal portion of the uterus was less tender than at first; the appetite began to improve, and the other symptoms gradually lessened, although some 'dragging pains' in the lower limbs occasioned a good deal of uneasiness, and various feelings of pain and fulness in different parts of the body were felt up to November. Towards the beginning of the month, the patient was suddenly seized with rigors in the thigh while leaning against the wall of the corridor, and they came on whenever she attempted to walk, although they disappeared in bed. About the middle of the month a disinclination for food manifested itself, and she became suddenly weaker. On the morning of November 30 a sudden convulsion came on, with gnashing of the teeth, torticollis, and tonic spasms in the arms and legs, especially the right, the whole body being turned towards the left. This lasted for about a minute, and was followed by trembling in the limbs, accompanied by some delirium. On being told to get out of bed, she made the attempt, but could not stand. The foot was in the position of talipes equinus, but there were no saltatory spasms. The pupils were unequal, the right being more contracted. Articulation was good in the intervals between the spasms. Tonic convulsions occurred several times during the day, and the patient complained also of a drawing together of the chest. Complete anæsthesia of the skin came on soon afterwards, with the exception of the face, the right ear, the neck, and about a hands-breadth of the infra-axillary region, on a level with the false ribs. The anæsthesia began to diminish on December 12, but diarrhœa and weakness set in, and an attack of suffocation ended the patient's life on January 7, after one or two attacks of blindness. The brain and spinal cord, with their membranes, were found to be perfectly normal. Both lungs were attached to the chest-wall by adhesions, which were so firm on the right side that a large cavity, occupying nearly the entire upper lobe, was laid open in the attempt to separate the lung. The right lung was solid and knotted, and did not crepitate at all; the left lung was also solid in parts. Solutions of continuity were found in the larynx and in the small intestine, affecting the mucous membrane, but nothing else worthy of mention in other organs.

ALICE KER, M.D.

2759. *Musso on Irregularities of the Pupil in the Insane.*—The author remarks (*Lo Sperimentale*, December 1883) that, whilst inequalities of the pupil are observed and carefully noted, irregularities in form have hitherto escaped attention, and have in fact been mentioned by only one or two writers. Last summer, when making a series of examinations of the eyes of epileptic patients, the author was struck with the frequency of pupils not altogether round, but oval, or presenting some other peculiarity of outline. He then examined the eyes of 100 sane men; and of 300 patients (150 men, 150 women) of the Turin Lunatic Asylum. In the insane, without counting very slight deviations from roundness, he found the pupil, in about 40 per cent. of the cases, more or less deformed; in some cases, being oval, in others irregular. In several cases, the deformity was only in one eye. In the sane and apparently healthy, 11 per cent. exhibited irregular pupils. It should be remarked that the oval or irregular outline was not always persistent, that is, the same pupil was sometimes round and sometimes oval. In the oval pupil, the long diameter was almost invariably vertical from above downwards; occasionally, however, it ran downwards and outwards, or downwards and inwards. As might be expected, these deformities were most commonly found in general paralytics. The author has made some experiments as to the effects of various stimuli and of repose on these pupils. As yet, however, these researches have not led to any result. One of the inferences that Dr. Musso draws from his observations is, that irregularity and inequality stand in close relation to each other; irregularity being in fact only the first step towards inequality.

2760. *Tamburini and Riva on the Relation between Lesion and Disordered Function in General Paralysis.*—The authors carefully examined the necroscopic details of sixty cases of general paralysis, and analysed them in relation with the various signs and symptoms observed in each case during life; thinking that a disease with such well-marked motor, sensory, and psychical phenomena would be likely to throw light on the localisation of cerebral functions.

In all the cases a lesion was found in some portion of the cerebral cortex. In fifty-six cases, the frontal lobes were affected; in forty-four, the parietal; in twenty-seven, the sphenoidal; in nineteen, the temporal; in nine, the occipital; in three, the island of Reil; in half the cases, the central convolutions were diseased. Touching motor localisation, it is noted that in fifty-five cases, in all of which there had been weakness of voluntary motion, some portion of the motor area of the cortex was affected. In twenty-one cases, a one-sided motor derangement corresponded to a lesion in the opposite cerebral hemisphere. In most the foot of the third frontal convolution was involved. In regard to sensory localisation, the disturbance in fourteen cases was of an irritative character (hallucinations), and in these disease of the cortex was found in the sensory zone (parieto-occipital and temporal regions). In six cases the disturbance of the special senses was of a paralytic character (weakness or loss of function); and in these also the same region was found diseased. In ten cases where, in addition to unilateral disorder of motion, there was, on the same side, diminished sensibility to tactile and painful impressions, the cerebral lesion was limited to the central convolutions; a fact that confirms Tamburini's view that in the so-called motor area of the cortex there are mixed centres of motion and sensation for the corresponding parts of the body. Touching psychical functions, the authors lay stress on the fact that, in a disease so characteristically marked by weakened intelligence, lesions of the frontal lobes should be found with such frequency (fifty-six times out of sixty), especially in the extreme anterior portions. They combat Mairet's opinion that in the melancholic form of the disease the sphenoidal convolutions are chiefly affected, inasmuch as in several cases of the melancholic type they found the sphenoidal convolutions healthy, whilst, on the contrary, they found them affected in other forms (maniacal, circular, demented) of the disease.

2761. *Marchi on the Morbid Anatomy of General Paralysis.*—Dr. Marchi reports (*Riv. Sper. di Fren. e di Med. Leg.*, Fasc. iv., 1883) upon nine cases of general paralysis that he has examined. His results differ in several respects from those obtained by others. In a single case there was diffuse sclerosis of the cerebral cortex, including both grey and white matter. In all the other cases the sclerosis was limited to some point of the cortex, especially of the frontal lobes and of the motor zone, at which points the pia mater was adherent to the cortex. Proliferation of the capillaries, thickening of the walls of the vessels and dilatation of the perivascular sheaths were also present; but neither alteration nor proliferation of the nerve-cells was observed, nor aneurisms nor extravasations of blood. Contrary to Lubimoff, the author does not admit that newly formed capillaries take origin from the connective cells, but from accumulations of cells arising like buds from the walls of the vessels; these lengthening constitute the vessels of new formation. The observations on the spinal cord do not correspond with those of other writers. Dr. Marchi has found neither sclerosis nor granular bodies as described by Westphal, Obermeier, and others. In some cases only he observed the nerve-cells of the anterior horns atrophied, homogeneous in appearance, with rigid prolongations, and in many instances the nucleus had disappeared.

2762. *Santini on Chorea.*—The author contributes (*Riv. Sper. di Fren.*, Fasc. iv., 1883) an interesting review of the evidence at present available to determine the pathogenesis of chorea. A concise account is given of the theories that have been advanced. The view upheld is that the disease primarily involves the motor centres of the cerebral cortex; the other motor centres of the cerebro-spinal axis probably taking part in the disorder, but only in a secondary and complementary manner. The morbid condition immediately underlying the choreic discharges is regarded as an abnormal excitement of the cerebral cortex, such as to derange the psychomotor centres. Any further excitement, as, for example, the stimulus of the will, increases the overflow and spreads it to other centres. In regard to the lesions observed after death in cases of chorea, the author, finding that they have been very different in different cases, and that frequently no morbid changes whatever have been discovered, believes that such lesions (emboli, softening of corpora striata and of optic thalami, dilatations of vessels) stand in etiological rather than in genetic relation with the disease. The experiments of Chauveau and of Onimus and Legros are criticised. Chauveau, having cut the cervical portion of the spinal cord in choreic dogs, found that the movements continued 'as regular and as rhythmic' as before, and that the abolition of the will rendered the movements more evident. Thence he concluded that the cord was the seat of the disease. Dr. Santini properly objects that such cases cannot be accepted as chorea, inasmuch as choreic movements are disorderly, irregular, and increased when the will is in action. Onimus and Legros, by exciting the posterior columns of the cord, exaggerated the movements of choreic dogs. Partial section of the posterior cornua diminished the movements; and complete section caused them to disappear altogether. If, however, chorea depended, as Onimus and Legros suppose, on over-excitement of the posterior cornua, we should expect to find hyperæsthesia a constant symptom of the disease. The cerebellum is excluded from any share in the disease, as it would not account for the psychical disturbances, apart from the fact that its functions are not sufficiently made out to warrant a theory. In favour of the cortical theory of chorea, the author dwells much on the psychical disturbances. Moreover, Golgi has shown several points of contact between chorea and paralytic dementia (general paralysis of the insane), a disease characterised by cortical degeneration. The relations between chorea, hysteria, and epilepsy lend support to the view that the cerebral cortex is the seat of the affection. The frequent origin of the disease from moral causes, too, has an important bearing on the question. WILLIAM R. HUGGARD, M.D.

2763. *Cotard on a Case of Loss of Visual Memory in a Melancholic.*—Cotard (*Le Progrès Méd*, No. 2, 1884) relates the case of a diabetic, aged 68, who had to be sent on two occasions to an asylum on account of extreme depression, with refusal to take food, and delusions that he was dying or dead. After the second attack he lost all memory of the appearance of external objects; his town, his own street and house became unfamiliar; he could only recall his wife's features imperfectly. The author thinks that this loss of visual memory was perhaps the explanation of the peculiar form of his melancholia which he has called 'délire des négations,' and remarks that it would be interesting to know if they are commonly associated. ROBERT SAUNDBY, M.D.

2764. *François on Gummata of the Brain.*—According to the author (*Revue de Thérap.*, No. 6, 1884) these may appear from the third to the fifteenth year after the outset of the disease. They are especially liable to occur in cases where the primary and secondary symptoms have been slight, and where the treatment was consequently discontinued too soon. The forms characterised by phenomena of excitement are less serious than those which begin by symptoms of paralysis and depression. For the treatment the author recommends large doses of perchloride of mercury (2 to 5 centigrammes daily), or inunctions with from 5 to 20 grammes of mercurial ointment. In other cases iodide of potassium has a very good influence, but it must be given in large doses—3 to 8 grammes daily.

2765. *Luys on Movements of the Brain.*—Besides the movements caused by the varying afflux of blood, the brain exhibits changes in form and position consequent on movements of the head. The author has shown (*Union Médicale*, No. 45, 1884) that in the erect posture the upper surface of the hemispheres is separated from the skull by an interval of 5 to 7 millimètres, and the vessels of the base are compressed. This may perhaps explain the giddiness and fainting sometimes caused by the sudden change from the recumbent to the sitting position. Luys explains in a similar way the symptoms caused by sea-sickness, sun-stroke, and prolonged railway journeys. J. S. KAESER, M.D.

2766. *Frédéricq on Respiratory Innervation.*—Dr. Léon Frédericq has made experiments with the view of investigating the correctness of the current interpretation of the phenomena attending stimulation or depression of the medulla oblongata ; the established view being that respiratory centres are situated in the medulla oblongata, while Brown-Séquard affirms that mechanical lesions of the medulla suspend respiration, not because they paralyse respiratory centres, but because, on the contrary, they stimulate an inhibitory apparatus. The difficulty of obtaining paralysis without the excitation inseparable from all traumatic lesions of nervous centres is overcome by employing cold as the agent, which, the author believes, can diminish, or even extinguish, the excitability of the medulla without its passing through any period of excitation. Paralysis of the medulla oblongata obtained in this way arrests respiration, while its direct excitation can provoke respiratory movements. This the author takes as peremptory proof of the existence in the bulb of respiratory impulsion. He admits, with Langendorff, the existence of accessory spinal centres particular to certain groups of respiratory muscles ; but he holds that these are under the dominion of a centre in the medulla, and can only emancipate themselves under exceptional circumstances (strychnia poisoning, &c.). The arrest of respiration which follows excitation of the medulla in animals poisoned by chloral is explained, by admitting that there may be in the medulla centres of inspiration and centres of expiration, exercising an inhibitory action on each other. PAUL CHAPMAN, M.D.

2767. *Gairdner on Lethargic Stupor or Trance.*—Dr. Gairdner, in the *Lancet*, Jan. 1884, pp. 5 and 56, contributes a commentary to a case recorded in the *Lancet*, Dec. 22, 1883, p. 1078, of a lady who was in a 'trance' continuously over more than twenty-three weeks, during which period life was preserved mainly by feeding with the stomach-tube. Comparison is drawn between Dr. Gairdner's case and several others. Amongst them reference is made to a case in the London Hospital of a woman, aged 27, under Dr. Langdon Down, who stated that the first indication of returning consciousness was observed when he was reading to the students at the patient's bedside some letters he had received, entreating that the woman should not be buried until every means had been tried. One of these letters caused a smile to pass over the patient's face, and soon afterwards she returned to obvious consciousness. [A series of most interesting cases similar to the one above, are noted in the *Medical Digest*, sect. 196 : 1 ; and several others have been recorded since the publication of this work. See *Brit. Med. Journal*, Vol. 1882, pp. 156, 432.—*Rep.*]

2768. *Stevenson on Neuralgia of the Sciatic Nerve successfully treated by Galvanism.*—Dr. Stevenson, in the *Lancet*, Jan. 1884, p. 105, reports four cases of sciatica treated by galvanism. The first case was that of a man, aged 45, who had suffered for some three months, and had tried several remedies without any relief. Galvanism was then tried. A wet pad of metal and amadou, connected with the positive pole of a Coxeter's constant current battery, was placed on the abdomen, and held in position by the patient. A carbon disc electrode, covered with chamois leather, connected with the negative pole, was moved gently up and down over the course of the great sciatic nerve. Twelve cells were as many as the patient could bear without giving him severe pain. In a week there was great relief from the treatment, and after a month's treatment he was cured. The other cases derived similar benefit, the application lasting eight to ten minutes each day at first, then on alternate days, the intervals between the applications being increased as relief was obtained.

2769. *Harkin on the Medulla Oblongata in its Relations with Sexual Disorders.*—Dr. Harkin, in the *Practitioner*, Feb. 1884, p. 98, contributes an able article on the medulla oblongata in its relations with sexual disorder, and on local blood-letting as a means of treatment. The author states he is satisfied that a centre for the genital or reproductive functions may logically be inferred to exist in the medulla oblongata. Notes of cases are given, showing the result of treatment based on the theory that a mutual relation exists betweeen a congested condition of the medulla oblongata and the disease called 'neurasthenia spinalis,' and also that of 'abnormal seminal losses.' The treatment adopted is simple ; wet cupping glasses were applied to the nape of the neck close to the occiput in severe cases, but in milder ones the administration of bromide of potassium and the extract of belladonna, with cold douches to the nape of the neck, frequently gave great relief.

2770. *Buzzard on the Treatment of Partial Epilepsy by Encircling Blisters with Transfer of the Aura.*—Dr. Buzzard, in the *Lancet*, March 1884, p. 373, gives full notes of a patient aged 23, who came under treatment on account of fits. The patient's own account of the beginning of a fit was that 'it feels like going to sleep in the big toe of the right foot, followed by numbness in the right calf, which runs up the leg, often spreading to the genitals, then up the right side and down the right arm ; the foot twitches up.' On admission, bromide of potassium was given every night, at first in doses of 30 grains, then 60 grains. The fits were thus reduced in frequency from nine to two or three

nightly. After about a week the bromide was discontinued, no other drug being substituted. Blistering fluid was now painted in the form of a ring one inch in width, encircling the right leg just above the ankle, which produced well-marked vesication. This was done on November 2, the result being that the day was quite free from fits; one occurred on the 3rd, one on the 4th, two on the 5th and 6th. The patient remarked that since the blister he felt twitching in the *left* leg at the beginning of the attack. Another blister was applied just above the last, and for nineteen days there was not one fit. On November 25 an attack took place, preceded by an aura in the pubic region; and another on the 26th, which commenced with a peculiar sensation in the right groin. In neither was there any trace of the original aura. With the diminution of attacks the patient greatly improved in health, gaining strength and mental power. In the *Practitioner*, October 1883, Dr. Buzzard published his results on the interception of epileptic aura by blistering, and since then has had several cases in which the treatment has been of marked service. In cases where the unilateral character is but ill-defined, the beneficial results are often only slight. A ring blister encircling the limb produces an effect after a quadrilateral blister has failed. A very narrow ring is sufficient if Paquelin's thermo-cautery be used.

2771. *Sewill on Spasm of the Muscles of the Face and Cataract due to Dental Irritation.*—Mr. H. Sewill, in the *Brit. Med. Jour.*, April 1884, p. 669, deals with the case of a middle-aged lady, the subject of inveterate neuralgia, who, during late years, had suffered from alveolar abscesses, and, in 1881, had complained of recurring pains in the right eye, complicated, since Jan. 1882, with persistent spasm of the right side of the face. In July 1882, partial loss of sight of the right eye from cataract, and partial closure of the same eye from spasm of the orbicularis, were superadded. Mr. Sewill extracted all the upper teeth in two sittings, and gradually removed the tartar from the lower teeth, which were hidden beneath an enormous mass of this substance. Within two days of the extraction the facial spasm entirely disappeared, but no change took place in the damaged lens.

2772. *Cantlie on Nerve-Stretching and Coiled Nerve-Fibres.*—In a recent number of the *Bristol Med.-Chir. Jour.*, Mr. Cantlie gives a good explanation of the impunity with which nerve-stretching can be performed. Some years ago, when dissecting the sciatic nerve of a frog, Mr. Cantlie noticed a peculiar but very decided spiral or coiled appearance of the components of the nerve-trunk. On stretching the nerve the coiling disappeared, but on relaxation it reappeared. Most of the nerves of the human body have been found to present this coiled appearance, and it is supposed that this condition prevents any injury from being done to the attachments of the nerves to the spinal cord when they are forcibly stretched.

2773. *Robson on a Case of Reflex Paralysis.*—Mr. Mayo Robson, in the *Lancet*, April 1884, p. 659, records the case of a girl, aged 15, who fell with a pitcher in her hand and cut her right forearm on its inner and anterior aspect near the middle. The cut was about two inches long, and healed slowly but well. After a few weeks some weakness was felt in the right hand, with wasting of the ball of the thumb and little finger. The hand was moist, cold, and livid. Her right forearm was rather thinner than the left. Two months later, there was wasting of the deltoid muscle and posterior scapular muscles. Galvanism was ordered to be applied to the affected parts, and gradual recovery took place.

2774. *Hammond on Miryachit and Neale on Lata.* Dr. W. A. Hammond, in the *Brit. Med. Jour.*, April 1884, p. 758, draws attention to a disease met with in Siberia, known to the Russians by the name of Miryachit. The person affected seems compelled to imitate anything he hears or sees, and an interesting account is given of a steward, who was reduced to a perfect state of misery, by his inability to avoid imitating everything he heard and saw. One day the captain of the steamer, running up to him, suddenly clapping his hands at the same time, accidentally slipped, and fell hard on the deck. Without having been touched, the steward instantly clapped his hands and shouted; then, in helpless imitation, he, too, fell as hard and almost precisely in the same manner and position as the captain. The description of this case reminded Dr. Hammond of the 'Jumpers,' or 'Jumping Frenchmen,' of Maine and northern New Hampshire (*vide Medical Digest*, sect. 1298 : 2). It is analogous also to the condition known by the Germans as Schlaftrunkenheit, and to English and American neurologists as somnolentia, or sleep-drunkenness. Some cases are also mentioned which have occurred in the author's own practice. One was that of a gentleman, who was roused one night because the bell of the street-door rang. He got up, and, without paying attention to his wife's entreaties, dragged the sheets from the bed, tore them hurriedly into strips, and proceeded to tie the pieces together. She finally succeeded in rousing him, when he explained that he thought the house was on fire, and was providing means for their escape. He did not recollect having dreamt anything of the kind, but was under the impression that the idea had occurred to him at the instant of his waking. These cases differ from epileptic paroxysms, in the fact that the discharge of nerve-force is consonant with the perception—which is in these cases an irritation—and is hence an apparently logical act; whereas in epilepsy the discharge is more violent, is illogical, and does not cease with the cessation of the irritation. [In the LONDON MEDICAL RECORD, 1878, p. 410, the reporter described a similar affection as seen in Java, and known there as 'Lata.' The victim of the tooth-drawing episode there described, nearly came to an untimely end in England. One day at dessert, her mistress, wishing to exhibit her irresistible tendency to imitate, catching the woman's eye, suddenly reached across the table, and, seizing a large French plum, made pretence to swallow it whole. The woman rushed at the dish and put a plum in her mouth, and, after severe choking and semi-asphyxia succeeded in swallowing it, but her mistress never tried the experiment again.—*Rep.*]

RICHARD NEALE, M.D.

DERMATOLOGY.

RECENT PAPERS.

2775. HUTCHINSON.—The Cryptogam Group. (*Med. Times and Gazette*, March, p. 413.)

2776. HYDE.—A Case of Multiple Sarcomata of the Skin.

ART 2775. *Hutchinson on the Cryptogam Group.*—Mr. Jonathan Hutchinson, in the *Med. Times and Gazette*, March 1884, p. 413, contributes a student's lecture on skin-diseases. In the first place, the notion that such so-called disease is a distinct malady must be dispelled. In nine cases out of ten, names have been given to modifications of processes of disease, which are due to something peculiar in the patient's constitution; and it must not be forgotten that diseases, as we see them, are seldom the result of a single cause. The importance of remembering the possible existence of personal peculiarities is dwelt upon in detail, and then a few words are directed to the anatomy of the skin, the microscopic characters of which ought to be constantly borne in mind. The classification of skin-diseases in groups, in relation to their causes, or, at any rate, in relation to their natural affinities, is proposed, and then the author goes on to describe them in their several families. The first one mentioned is that which is due to the invasion of vegetable parasites. As the type-malady of this group, the author takes ringworm. General health exercises no material influence on ringworm, but personal peculiarities do so. Children with black, strong, hard hairs suffer much less from it than others, and after the age of fourteen or fifteen the hairs cease to be liable to the attacks. In adults, the fungus confines itself to the epidermis, avoiding the scalp, and flourishing only on certain parts of the body, especially the armpits and regions adjacent to the perinæum, where it is often mistaken for eczema marginatum. Chloasma is in close alliance with ringworm, and the author inclines to the belief that the two diseases depend upon altered forms of the same fungus. The next disease mentioned is favus. Like ringworm and chloasma, favus is produced solely by contagion; it begins, almost without exception, in childhood, and is easily cured on all parts but the scalp. Thick masses of fungous material grow upon the surface of the skin or scalp, and often have the characteristic smell of mice. It is rare in England, but more common in France. If on the skin, it can be cured by applying almost any parasiticide, but on the scalp it is advisable to cauterise the part with nitric acid. With these three diseases, ringworm, chloasma, favus, the list of the cryptogamic affections of the human skin is completed; and the name which has been adopted for the whole family is that of *tinea*. Tinea tarsi has nothing to do with the presence of a cryptogam, and the term ought not to be used. The subject of alopecia areata is touched upon, the author suspecting that it is a true *tinea*, and facts are brought forward to support this view, though the microscope fails to detect any fungus. RICHARD NEALE, M.D.

2776. *Hyde on a Case of Multiple Sarcomata of the Skin.*—Dr. I. N. Hyde, of Chicago, reports a very interesting case in which the diagnosis of multiple sarcomata of the skin was made after microscopic examination, and which does not seem to be in any way open to question, although there was a superficial resemblance to tubercular leprosy in the general look of the deforming growth. The patient, a Belgian by birth, was 46 years of age, and of good circumstances. The malady showed itself first in January 1881, when he noticed small tumours forming on the surface of the body. For a few years before he had suffered occasionally with general itching and scaliness of the skin. These tumours in the skin increased in number and size, and he came to Dr. Hyde's clinic in the following April. He was then in fair health, with the exception of the disorder of the skin, which exhibited several raised areas of infiltration, of the size of the palm; and interspersed between these there were everywhere raised tubercles in great number, varying in size from a pea to a walnut, and not at this time breaking down. By the middle of June, two months only from the time the patient first presented himself, his disease had progressed so fast that his features were completely obliterated, and his body and limbs converted into a mass of tuberculated growths, dusky red in colour, but with no pigment, many of them breaking down and exuding a fœtid discharge. He became incapable of moving his swollen limbs and quickly lost strength; a constant pyrexia developed, and he died comatose a month later—*i.e.* little more than six months from the first appearance of the tubercular condition. The secret fraternity to which he belonged refused any *post mortem* examination; but specimens of the tumours had already been prepared and examined by Dr. Heitzmann, who pronounced them to be undoubtedly round-celled sarcomata, with no trace of normal skin structure. Dr. Hyde discusses the diagnosis of the disease from the more common multiple fibromata and from lepra, and gives some details of the few reported cases of similar malignant growths he has been able to find.

WALTER PYE.

REVIEWS.

ARTICLE 2777.

A System of Obstetric Medicine and Surgery, Theoretical and Clinical, for the Student and Practitioner. By R. BARNES, M.D., and FANCOURT BARNES, M.D. Vol. I. London: Smith, Elder, & Co. 1884.

IT is hardly possible within ordinary limits to notice a work like this. Evidence of extensive research and original work strike one throughout, and, as a systematic treatise on obstetrics, it certainly has no equal in the English language. The history of gestation, puerpery, mechanism of labour and of hæmorrhage, are contributed by Dr. R. Barnes; the prophylaxis of puerperal diseases and the description of the operations are by Dr. Fancourt Barnes. The chapter on embryology, which is especially good and clearly written, is by Professor Milnes Marshall; the leading points of teratology, with especial reference to classification and clinical practice, are contributed by Mr. Noble Smith; while to Mr. Power is due the account of the affections of the eye observed in pregnancy.

The first volume brings the subject matter down to the end of gestation. Chapter I. deals with the Development of the Ovary and Ovulation. Chapter II. is on the Female Generative Organs and the Menstrual Process. Here it is well pointed out that the menstrual flow is not the perfecting of a process already commenced, but marks the commencement of retrograde development, the undoing of a process which has already reached and passed its first completion; the menstrual flow or breaking up of the decidua being probably due simply to the failure of an ovum to arrive. The discharge of the ovum from the ovary occurring about the same time as the menstrual flow, and taking probably about eight days to pass through the Fallopian tube, the decidua

with which it ultimately comes into relation is not that which is broken up and discharged at the time the ovum was set free from its Graafian follicle, but the next succeeding one.

Chapter III. is on Impregnation and Conception, with a general account of Mammalian Development. Very interesting is the description of the moving of the germinal vesicle to the surface of the egg, with its partial protrusion as 'polar bodies,' thus leaving the ovum with an imperfect nucleus, no longer capable of multiplication by fission, and so of producing an embryo, as occurs in some insects. The penetration of the ovum by the spermatozoon, its growth as the male 'pronucleus,' and its fusion with the female pronucleus to form the definite nucleus of the fertilised egg, which thus regains the power of multiplication by fission, is denoted. This process is compared to cross-fertilisation, and Balfour is quoted as suggesting that the habit of forming polar bodies, *i.e.* of providing against development without impregnation, has been acquired and perpetuated for the express purpose of ensuring cross-fertilisation.

Chapter IV. treats of the Development of the Human Embryo and Fœtus. The establishment of a vascular connection between the embryo and the chorion, and, indirectly, with the mother, is the characteristic of mammalian development. In the human embryo the allantois is formed unusually early, and in an exceptional manner; that is, in the most highly developed mammal this distinctive feature (the vascular connection) is thrown back to an earlier stage and hurried on prematurely, even at the expense of the embryo, whose development is unusually retarded.

Chapter V. is on the Placenta and the Physiology of the Fœtus.

Chapter VI., on the Anatomy of the Generative Organs, is a very good chapter, and of great clinical importance are the descriptions of Douglas's pouch, and of the connective tissue of the pelvis.

In Chapter VII., on Gestation, Childbed, and Lactation, great stress is laid on the increased nervous tension in pregnancy. Morning sickness is explained as a regulator or governor of nervous energy, letting off excess of energy, and reducing tension of nervous centres, and, therefore, conservative in action. Dr. R. Barnes agrees with French authors in finding increase of weight of the heart; and this hypertrophy is also due to increased nervous tension, since the sphygmograph proves increased tension early in pregnancy, long before the uterus is large enough to cause appreciable pressure on the aorta or the iliac arteries. The frequent occurrence of physiological glycosuria is mentioned in pregnant women, but with no signs of illness, and it disappears after delivery and lactation. Physiological albuminuria also is often found, and may be simply the indication of a physiological difficulty, and the escape of albumen by the kidney may be the natural means of relieving vascular tension. The appearance of sugar, albumen, and leucine is 'the signal of transition from physiological to pathological processes.'

In Chapter VIII., the Signs and Symptoms of Gestation, 270 to 280 days are given as the limit of gestation. Cases exceeding this are very rare, and after 290 days must be considered as apocryphal.

Chapter IX. is on Abnormal Gestation. In rupture of tubal gestation, early laparotomy is recommended. In abdominal gestation, expectancy is the wisest course until the natural term is completed, and then laparotomy; after the death of the fœtus, laparotomy is also advised. In the complication of pregnancy with ovarian tumours, ovariotomy is the most rational course: twelve successful cases are recorded, the rule being to operate as early as possible.

Chapter X. treats of Displacement of the Gravid Uterus. Retroversion, incomplete retroversion, the sacciform dilatation of the uterus are very well described.

In Chapter XI., Diseases of Gestation are divided into pathological exaggerations of the physiological conditions of gestation and pathological processes, continued from the pre-gravid state or grafted on the gravid state. Pregnancy is the great test of bodily soundness. The great danger attending chorea, which is seldom, if ever, a new disease in pregnancy, is dwelt on. The signs of high tension with arterial pressure in the kidneys, disposing to convulsion, with or without albuminuria, are high tension-wave, indicated by the sphygmograph, the pulse and heart-beat observed by auscultation, and Mahomed's test. The author's theory of the pathology of albuminuria and convulsions is that 'several conditions concur to cause the associated disorders. These are (1) the hydræmic state of gestation leading to imperfect nutrition of the nervous centres, increasing (2) the normal nervous tension and irritability, and (3) the normal vascular tension; with these comes (4) blood-poisoning from imperfect elimination of waste stuff by the kidney, and emunctories.' In the albuminuric stage, the prophylaxis is rest. When a fit is probable, no examination should be made, no catheter passed, no medicine or food should be pressed until the patient is under the influence of chloroform. A milk-diet is ordered. In the fit, bleeding is occasionally useful, but chloroform is the chief remedy. Nitrite of amyl, nitro-glycerine, and nitrite of sodium are all mentioned favourably. The good effect of labour in discharging the excess of nerve-force by its normal channel is a point to remember. Hypertrophy of the heart, starting from gestation, may end fatally after labour; in enfeebled states, involution is impeded and fatty degeneration remains; 'this is especially likely to happen in first pregnancy, occurring late in life, when the system is unequal to the sudden impulse of evolution and involution.'

Chapter XII. treats of Abortion. The authors insist on the beneficial action of iron in pregnancy; it counteracts the anæmia then common, and thus lessens the risk of hæmorrhage in labour. 'As to the presumed identity of ecbolics, emmenagogues, and abortifacients, it is a popular belief prevailing among lawyers, and to some extent countenanced by medical men, that agents reputed to have the virtue of provoking menstruation will also provoke abortion. Although there may be a substratum of truth underlying this assumption, nothing could be more unscientific. Criminal charges have been based upon the administration of iron in medicinal doses, regardless of the fact that iron is strongly indicated in the anæmia of pregnancy to prevent abortion.'

In Chapter XIII. on Diseases of the Embryo, deformities from arrest and deformities from excess of development are described. A very instructive summary is given by Mr. Noble Smith.

Chapter XIV. treats of Diseases of the Placenta. In hydatiform degeneration of the placenta, the authors think that the hypothesis of the con-

version of the mature placenta must be rejected; and well authenticated cases of living children having been born in association with vesicular disease of the placenta are against the theory that the cystic change starts from the death of the embryo. 'Still there is a plausible explanation of the case we have stated, consistent with the woman's chastity. It is found in the history of twin-gestations. One ovum may proceed to normal development, the other may pass into cystic degeneration, its embryo being destroyed. The healthy ovum, child, and placenta, may be born, and the cystic ovum may be retained for awhile.' The retention of the mole may be accounted for by the known tendency of growth of the cystic mole to the uterus by penetration into its walls.

This very slight and imperfect sketch may help to give some idea of the scheme and scope of this important work, which is destined to take its place with the most esteemed classics of medical literature. The illustrations are very numerous and good, many of them being original. The style, like that of all Dr. Barnes's writings, is pleasant and eminently readable, and we feel sure that the *System of Obstetric Medicine and Surgery*, containing, as it does, the latest teachings of so high an authority, in theory and practice, will meet with the cordial approval of students and practitioners.

G. D'ARCY ADAMS, M.D.

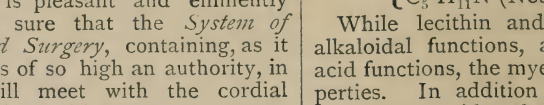
ARTICLE 2778.

A Treatise on the Chemical Constitution of the Brain. By J. L. W. THUDICHUM, M.D. London: Baillière, Tindall, & Cox. 1884.

As the author states in his introduction, his work 'is a contribution towards a system of chemical statics of the brain,' treating in the first instance of brain matter as a whole; then isolating and scrutinising the constituents of nerve matter, and endeavouring by a study of their peculiarities and combinations to obtain an insight into normal and abnormal chemical functions.

The first great fact, as Dr. Thudichum points out, that strikes the inquirer into the constitution of the nervous tissues, is the abundance of water in their interior, which, together with the peculiar way in which it is contained, favours a great mobility of the ultimate particles, and allows much penetrability of its substance by liquid diffusion. The brain, indeed, is essentially made up of colloid matter, and may be compared to a colloid septum between the arterial blood and cerebro-spinal fluid of the ventricles on the one side, and the cerebro-spinal fluid and venous blood of the arachnoid space on the other, the water of the brain being chemically combined as 'water of colloidation.' It contains also a considerable amount of an albuminous base; and the bearing of this albumen in the brain seems to be influenced by other peculiar bodies also present in the brain-substance. These bodies exist chiefly in the form of three groups, the first of which contains five or sometimes six elements, one of which is always phosphorus, and, therefore, the term phosphorised is applied to the group. The members of the second group contain four elements, phosphorus being absent, but nitrogen always present; they are, therefore, termed nitrogenised. The members of the third group contain only three elements, phosphorus and nitrogen being absent, and may be termed oxidised bodies.

The phosphorised bodies cannot, as was formerly supposed, be regarded as glycerides; but they may more correctly be named phosphatides, on account of their similarity in constitution to ordinary phosphates. As an example, take lecithin, which is a nitrogenised phosphatide:—



In the same group as the lecithins we likewise find the kephalins, paramyelins, and myelins; and just as lecithins are characterised by the presence of the radicle of oleic acid, the kephalins are characterised by the radicle of a peculiar acid named by the author kephalic. A kephalin he defines as a kephalo-stearo-glycero-neuro-phosphatide, represented by the formula—

$$OP\left\{\begin{matrix} C_{17}H_{28}O_3\text{(Kephalyl)} \\ C_{18}H_{35}O_2\text{(Stearyl)} \\ C_3H_7O_3\text{(Glyceryl)} \\ C_5H_{11}N\text{ (Neuryl)} \end{matrix}\right\} = C_{43}H_{81}NPO_9 + Aq.$$

While lecithin and paramyelin exhibit mainly alkaloidal functions, and kephalin alkaloidal and acid functions, the myelins exhibit mainly acid properties. In addition to these mononitrogenised monophosphatides, there is a subgroup of dinitrogenised monophosphatides consisting of amidomyelins and -kephalins; and another subgroup of diphosphatides, one of which is named assurin. An example of a non-nitrogenised phosphatide is kephalophosphoric acid.

These phosphorised bodies possess alkaline, acid, and alkaloid affinities, which, however, are capable of being overcome by water in quantity, but this is overcome in its turn by the superior affinities of certain of the metallic oxides. Not only is there a great diversity of affinities, but their exercise is greatly influenced by the mass of the reagent and the mass of water present, and thus 'the interchange of affinities may produce a perfectly incalculable number of states of the phosphorised and consequently of brain matter.' From this it therefore follows that the neuroplasm must be affected by the slightest external chemical influence reaching it by the blood; 'watery serum will wash the brain; a more watery one will make it swell and displace mechanically within physiological limits what it can; while a still more watery one will make the brain dropsical, and produce some of the conditions of mechanical pressure.'

The nitrogenised nonphosphorised substances of the brain, constituting the second group, imitate in many respects, but with little intensity, the properties of the first, or phosphorised group. This second group includes six great subgroups. The first of these is that of the cerebrosides or bodies which contain a peculiar new isomeric sugar, cerebrose, and in which different radicles of acids and alkaloids are inserted. Phrenosin, $C_{41}H_{79}NO_8$, is an example. A second subgroup is that of the cerebrinacides, as cerebrinic acid, $C_{59}H_{113}NO_9$. Next follows the subgroup of the nitrogenised fats, or amidolipotides, as bregenin, $C_{40}H_{81}NO_5$, and krinosin, $C_{38}H_{77}NO_5$, and then in succession a subgroup of alkaloids, one of which is the well-known body hypoxanthin, $C_5H_4N_4O$; and another subgroup of the amido-acids and, amides, as represented by leucin and tyrosin.

The third group, composed of three elements only,

or the oxygenised non-nitrogenised principles, consists mainly of alcohols and organic acids, the most prominent member of the former being cholesterin. A subgroup of carbohydrates includes inosit and glycogen; and the subgroup of the non-nitrogenised organic acids is represented by formic ($C H_2 O_2$), sarcolactic ($C_3 H_6 O_3$), succinic ($C_4 H_6 O_4$), and oxyglyceric acids ($C_3 H_8 O_4$).

We come now to the albuminous substances of the brain, one of the subgroups of which the author regards as nitrogenised sulphatides, albumen and collagen; and the other as nitrogenised sulphatide-phosphatides, plastin and a nuclein body, gangliocytin. A new isomer of leucin, named glycolucein from its sweet taste, is here described.

Lastly, we have the group of inorganic principles, including acids, bases, and salts, either free or in combination with many of the foregoing organic principles.

Dr. Thudichum next gives an account of the methods pursued by him for the isolation of the above immediate principles; but as this is not the first time these have been published, no further reference will be made to them here. The author's masterly sketch of the lecithins and kephalins can also here be only passingly referred to. The very numerous reactions of kephalin with different acids and salts are given in detail, and some of these appear to be more or less characteristic. As to the myelins, they can be obtained directly, without precipitation, from the cold alcoholic extracts of white matter, by concentration and cooling, redissolving the precipitate, and letting the solution stand a long time in the cold. When freshly obtained, myelin is white; it crystallises from absolute alcohol or ether in curved needles or rhombic ovoid scales, but when drying in mass after having been thus deposited it becomes transparent and waxy. With lead acetate and ammonia it gives a white salt containing an atom of lead, which is insoluble in alcohol and ether.

So far as all the phosphorised educts are concerned their only common feature is the presence of phosphorus, which, by ordinary analytical processes, is obtained in the form of phosphoric acid; but there is every reason to assume that the phosphorus is contained in the organic principles in the form of phosphoryl (P O). Consequently Dr. Thudichum assumes that the basal radicle of all phosphatides is that of phosphoric acid; that the hydroxyl molecules of this acid may be replaced by acid, basic, or alcoholic radicles; and that thereto we may also have a fourth radicle superadded as an anhydride, or attached by substitution to one of the other radicles.

The brain, as a whole, is an aggregated mass of bioplasm, which derives its peculiarity mainly from specific chemical additions. The living brain-tissue or neuroplasm contains in small quantity a soluble albumin resembling serum-albumin; a small quantity of fibrin; and a considerable quantity of what, from its similarity to the body forming the stroma of the blood-corpuscles, has been termed globulin, but which, from its function in the brain, may be characterised as plastin, or neuroplastin. Of the insoluble residue after the alcoholic extraction of the brain-substance, this neuroplastin forms by far the greater proportion, the albumin and fibrin not amounting to more than an eighth of the neuroplastin, the latter also being 1 per cent. more abundant in the white than in the grey matter.

The ash of fresh grey tissue amounts to about 1 per cent., and that of white to about 1·7 per cent.

The following is a synopsis of the results of the analysis of the white and grey matter of human brain.

	Grey. Per Cent.	White. Per Cent.
Water expelled at 95°	85·27	70·230
Neuroplastin	7·608	8·630
Ether extracts (kephalin, lecithin, and cholesterin, &c.)	1·950	11·497
Cerebrin and myelin	0·434	6·910
Lecithin, kephalin, myelin	0·780	
Inosit	0·193	0·215
Lactic acid	0·102	0·045
Phosphoric acid	0·017	
Potassium and sodium	0·117	
Watery extract	0·500	1·403
Sulphuric acid, alkaloids, and loss.		

As to specific gravity, Dr. Thudichum concludes that it is found higher, the smaller the quantity of brain-tissue employed in the experiment; specific gravity estimates of this tissue in water would, therefore, appear to have only an approximate value. The mean specific gravity of white tissue he states to be 1·041, of grey tissue 1·032, and of the entire brain 1·037.

The relative proportions of grey and white matter in the entire brain Dr. Thudichum assumes to be, according to one method of calculation, 45 per cent. of grey to 55 per cent. of white, or, according to another, as 40 per cent. to 60 per cent. respectively.

The book closes with a sketch of a systematic quantitative analysis of the brain, and a table is given showing in full the results of the quantitative analysis of a human brain, the relative proportions of the different constituents in the cerebrum and cerebellum of white as well as of grey matter being indicated. In the right hemisphere, for example, the following percentages were found: albumen, 35·68; white matter insoluble in ether, 11·63; white matter soluble in ether, 6·97; 'buttery' matter, 21·66; kephalin, 3·34; myelin, 5·22; lecithin, 5·9; cholesterin, 8·9; inosit, 0·43; lactic acid, 0·64; hypoxanthin and alkaloids, 1·30; indefinite extractives, 2·63; potassium, 0·25; and sodium, 0·40.

The whole work is based throughout upon original researches, and as such is deserving of the highest praise. At present, however, and until Dr. Thudichum's results have been confirmed, it will be impossible to pass a very decided opinion as to their stability. But so far as a mere superficial examination of such a very vexed and difficult question can enable one to judge, his researches appear to form one of the most important contributions that has hitherto been made to the chemistry of the brain. The discussions on this important subject have been very numerous during the last few years, and in them Dr. Thudichum has borne an active part, but from the present treatise all controversy has happily been excluded.

T. CRANSTOUN CHARLES, M.D.

ARTICLE 2779.

Aids to Physiological Chemistry. By J. L. W. THUDICHUM, M.D. London: Baillière, Tindall. & Cox. 1884.

THIS little book begins with some general considerations upon the chemical constitution and properties of protoplasm, and its opening pages bristle with such technical terms as 'colloidation,' 'meta-

boles,' 'enchylema,' 'amylonide,' &c. The properties of bioplasm are given pretty fully, and among its essential ingredients the following are enumerated : a colloid albuminous matter termed plastin, nuclein, myosin, vitellin, pepsin, peptons, myelin, cholesterin, certain amides and alkaloids, fats and fatty acids, starch, glycogen, sugar, resins and pigments, mineral ingredients, water, and gases. 'Bioplasm must at one time or another or in succession contain all the chemical principles which are the result of progressive and retrogressive biomorphosis.'

The section dealing with nerve-matter is very extensive for such a small and elementary manual, and enters into an enumeration and summary description of the immediate principles of the neuroplasm, as the author terms it. This is entirely a statement of Dr. Thudichum's own elaborate work on this difficult subject, but we think it is rather out of place in the present short *Aids to Physiological Chemistry*. The brain is certainly the most complicated chemical laboratory of the human body, and it is not, therefore, the one into which the junior student can, with advantage, be introduced at the beginning of his studies in physiological chemistry ; besides, the chemistry of the brain cannot yet be regarded as settled or fixed on a firm basis ; and until Dr. Thudichum's researches and conclusions have been verified and accepted, it is too soon to make them the student's stepping-stone into physiological chemistry.

With Dr. Thudichum's criticism as to the histological constitution of muscle we cannot agree, nor is the weight of evidence in favour of his statement that the sarcolemma of striped muscle is elastic tissue ; the rest, however, of the section on muscle is full, and in it the chemical constitution of muscle is discussed clearly and forcibly. In the section upon blood, hæmoglobin is treated fully and graphically, as well as its alterations in certain diseased conditions. Denis' theory as to the coagulation of the blood, is given in detail, and then Schmidt's theory is passingly discussed ; but no reference is made to the more recent hypotheses of Hammarsten and Frédéricq.

Gastric digestion is treated rather imperfectly, and no reference is made to the chief theories that have been proposed in explanation of the process—the important contributions to this subject, for example, by Brücke, Kühne, Haidenhain, and Klemensiewicz, not even being mentioned. Pancreatic digestion, however, is discussed more satisfactorily ; and the same may be said for the section on the constitution of the bile, although the account of the biliary pigments and of glycogen is rather meagre.

The function of the enteroplasm, or lining epithelium of the intestine is, according to the author, one of great importance, as it is probable that it produces serum which it adds to the serum of the blood, and transmits to the liver, also producing serum which it adds to the lymph and transmits to the lymphatic glands and through them to the venous blood and systemic circulation. As the necessary result we should therefore regard the serum, lymph, and chyle as products of the life-action of enteroplasm—lymph and chyle becoming serum only after having undergone the modifying influence of the three other bioplasms contained respectively in the liver, lymphatic glands, and blood-corpuscles.

The constituents of the urine are discussed under the respective headings *ureides*, as urea, uric acid, &c.; *aromatic principles*, as hippuric acid, &c. ; *pigments*, as urochrome ; *alkaloids*, as hypoxanthin, &c. ; *extractive acids*, as kryptophanic acid; *inorganic salts* ; and *accidental ingredients*. Here also Dr. Thudichum keeps closely to the results of his own work, giving them as accepted facts. Now it must be stated that all these results, such as those bearing upon the urinary pigments and the extractive acids, have not met with the acceptance that they possibly merit at the hands of most of Dr. Thudichum's continental colleagues : it further appears to us, and we confess we speak with some diffidence, that it would have shown better taste on his part not to have laid them down, as he has done, as if they were all accepted data, particularly as the book is intended for the use of junior students in medicine.

The chemical constitution of connective tissue, adipose tissue, cartilage, bone, teeth, spleen, ovaries, testes, mammary gland, milk, pus, and serous effusions—given very briefly—brings this little volume to a close, in which, we feel bound to say, that the author, despite his well-known ability, is not seen to advantage. T. CRANSTOUN CHARLES, M.D.

ARTICLE 2780.

On the Various Modes of Testing for Albumen and Sugar in the Urine. By GEORGE JOHNSON, M.D., F.R.S., President of the Royal Medical and Chirurgical Society ; Professor of Clinical Medicine in, and Senior Physician to, King's College Hospital. London : Smith, Elder, & Co. 1884.

THE substance of this admirable little book has already been published in the form of lectures. In every respect the instructions are so practical and so much to be depended on, that the book is deserving of perusal by every physician who wishes to keep up an accurate acquaintance with this most important subject.

In discussing the heat-test for albumen, the author states that, the more abundant the albumen in solution, the lower is the temperature at which coagulation begins ; but it should likewise be remembered that the temperature at which the coagulation occurs varies also with the different albumens, of which several forms may appear in the urine, and that the presence of a free acid or of a neutral alkaline salt causes it to take place at a lower temperature, while the presence of an alkali renders the coagulation temperature much higher. The heat-test alone, as the author shows, may mislead (1) by not detecting albumen in alkaline urine, and (2) by giving a delusive phosphatic precipitate in a non-albuminous urine.

When nitric acid is added to a highly acid urine it sometimes causes a turbid deposit of urates, but this disappears on the application of heat. A slight milkiness also is caused by the addition of the acid to the urine of patients who are taking copaiba ; but here the urine has a peculiar resinous odour, and, although acid, it is not coagulated by heat or by picric acid.

The tendency exhibited by albumen to pass into the condition of an albuminate is next referred to, and it is stated that, just as a drop or two of nitric acid may prevent the coagulation of albumen by heat, so a great excess of nitric acid, added to an albuminous urine, may either redissolve the coagulum which first forms, or, if rapidly poured in, entirely prevent its appearance.

Heller's method of applying the nitric acid is mentioned as one of the most delicate tests for albumen; but in picric acid Dr. Johnson considers we have a still more delicate test for minute traces. A saturated watery solution is poured on the surface of the urine contained in a long test-tube, or the picric acid is added in the form of a pinch of the fine powder.

Peptones are also precipitated by picric acid, but the precipitate disappears on the application of heat; and by filtration it is therefore possible to separate them from precipitated albumen. Precipitated peptones resemble a sediment of urates in the fact that both are dissolved by heat; but, while the urate deposit shows large granules of urate of soda and uric acid crystals under the microscope, freshly precipitated peptones appear quite homogeneous and free from solid particles. When, however, they are dissolved by heat and reprecipitated on cooling, the deposit consists of very minute granules.

Upon the rose-red colour given by Fehling's solution with peptones, Dr. Johnson does not place as much reliance as a test as upon picric acid. With his conclusion, however, that the occurrence of peptones in the urine is by no means frequent, the author differs from such authorities as Senator, Gerhardt, Petri, and Eichwald, by whom these bodies have been found in a great many diseases; Senator even affirming that in albuminous urine certain albuminoid bodies like peptone are very often present. When albumen and peptone are present in the same urine, this is how the author detects and separates them. Picric acid is added and the urine heated; the precipitate, instead of being increased and rendered more dense, as when albumen alone is present, will be lessened and dissolved in proportion to the amount of peptones in solution. If the boiling liquid be then filtered, the peptone picrates will pass through and precipitate again on cooling, the coagulated albumen remaining on the filter.

Dr. Johnson is no believer in physiological albuminuria, although this has been upheld by such authorities as Leube and others; and he insists on the fact that the smallest trace of albumen in the urine, with or without tube-casts, is always abnormal and pathological. Without possibly going so far, it is certainly safest to regard the continued presence of even a trace of albumen as pathological and as indicative of danger.

In treating of sugar, Dr. Johnson gives a synopsis of the various modes of testing for sugar in the urine. Moore's test is dismissed as only being sufficiently delicate to indicate a proportion of sugar less than 2 grains to the ounce. The fermentation test also is objected to on account of the time required for its completion. But this test, despite Dr. Johnson, must be regarded as one of the most satisfactory tests for sugar, and it only fails when the sugar is below 0·5 per cent. And, further, as the element of time in a quantitative determination is not generally of great importance, the method can likewise be employed, after Dr. W. Roberts' differential density method, to estimate the sugar. This method, beside the ease of its performance, is also for practical purposes very nearly exact.

Dr. Johnson depends chiefly on the picric acid and potash test for sugar. When these bodies are boiled with diabetic urine, an intensely dark claret-red colour is developed; and upon the depth of the tint he founds his method for the quantitative estimation of the sugar present. A standard solution is prepared by boiling for 60 seconds 2 fluid drachms of a solution of grape-sugar, containing 1 grain to the ounce, half a drachm of liquor potassæ (P.B.), and 40 minims of a saturated solution of picric acid —the whole being made up to 4 drachms with water. But as the colour of this standard solution tends to fade rapidly, an artificial standard is substituted. This latter consists of a mixture of liquor ferri perchloridi fortior (sp. gr. 1,338), ʒj.; liquor ammoniæ acetatus (sp. gr. 1·017), ʒiv.; glacial acetic acid (sp. gr. 1·065), ʒiv.; liquor ammoniæ (sp. gr. 0·959), ʒj.; distilled water to ℥iv. The colour of this solution is equal to that given by a solution of sugar containing a quarter grain to the ounce. In determining the sugar in a specimen of urine, a drachm of it is mixed with half a drachm of liquor potassæ and forty drops of a saturated watery solution of picric acid, and the mixture is boiled for sixty seconds. The depth of tint obtained is compared with that of the standard, and by dilution of the coloured urine in a graduated vessel the two are made to correspond; from the amount of dilution required, the sugar is easily calculated.

Dr. Johnson claims for this picric acid and potash method that it is as accurate as any other, while in the case of urine it is even more accurate than either Fehling's process or its modification by Pavy, owing to its not being affected by the presence of uric acid. To Duhomme's modification of Fehling's process, which renders the determination very easy, he does not refer; and the use of polarising saccharimeters is also passed over, although by circular polarisation the most accurate estimations may be most readily made. But for practical purposes his picric acid and potash method is to be recommended, not only for the undoubted advantages it possesses, but also for the ease with which it can be learnt and practised.

In conclusion, Dr. Johnson's advice that in all cases of disease the urine should be tested for albumen and sugar, is one worthy of being acted on, coming as it does from a physician of such large and varied experience.

T. Cranstoun Charles, M.D.

Article 2781.

Archivio di Ortopedia. Pubblicato dai P. Panzeri e F. Margary, e redatto dai A. Arcari ed E. Secchi. Anno i., Fasc. 1. Jan. 1884. With 9 Woodcuts and 11 Phototypes. Milano: Agnelli.

The development of specialties is a factor in scientific progress, and among recognised specialties none require more special study than orthopædic surgery. The addition of the *Archivio di Ortopedia* to the crowd of medical journals is thus justified. Orthopædics are now studied with greater scientific precision, and the improvements in modern surgery have caused many of the dangers in operations on the bones and joints to disappear; as a consequence this specialty, after years of comparative neglect, is now one of the most vigorous branches of surgery. This first number is exceedingly well got up, and contains five original articles, all of interest; on the Treatment of Congenital Varus (first part), by Dr. Margary; Secchi on Mechanical Corsets in the Treatment of Scoliosis; Panzeri on Two Rare Deformities of the Leg Corrected by Osteotomy; Novaro on a Cure of Subtrochanteric Osteotomy for

a Severe Coxalgic Deformity; a Table of Cases of Knee Valgus Operated on in the Hospitals of the Bambino Gesù and Fate-bene Fratelli in Rome, by Ceccarelli. This number also contains many valuable abstracts from Italian medical papers, as well as from English, French, and German sources, and a good review of P. Vogt's *Moderne Orthopädik*. The woodcuts and phototypes illustrating the papers are exceedingly good. The *Archivio di Ortopedia* is published in fasciculi, which will form a volume of about 600 pages in the year.

G. D'ARCY ADAMS, M.D.

ARTICLE 2782.

The Physiological and Medicinal Action of 'Fluoric' Acid and the Fluorides. By L. A. WADDELL, M.B., Surgeon, I.M.S., Resident Physician, Medical College, Hospitre, Calcutta. Calcutta: W. Newman & Co. 1883.

FOR some time past hydrofluoric acid has been used with success in the treatment of goître, and recently the ammonium fluoride has attracted attention as a remedy for enlarged spleens of malarial origin. A consideration of these facts induced the author to undertake an investigation—chemical and pharmacological—into the action of hydrofluoric acid and its salts. He commences by describing at some length the mode of preparation of 'fluoric' acid and the metallic fluorides. He gives a detailed account of the fluorides of potassium, sodium, and ammonium, and calls attention to the quinetum fluoride recently obtained by Dr. Warden of Calcutta—whose name is favourably known to us in connection with a work on *aörus precatorius* and 'sui-poisoning'—from quinetum, the well-known 'cinchona febrifuge.' The author then considers the action of the acid on the skin and mucous surfaces, and the effects produced when it is brought into contact with albumin and chlorophyll. The results obtained with Gowers's hæmacytometer are very striking. The cause of the numerical reduction of the red corpuscles under the influence of the hydrofluoric acid in the alkaline fluorides is discussed at considerable length, and this is followed by a dissertation on the *modus operandi* of the salts in effecting a reduction in the size of the chronically enlarged spleen. Attention is directed to M. Maumené's statement that the fluorides, administered for a considerable time to healthy persons, are capable of producing a condition of goître. The solution usually employed contains one-fourth of a grain of anhydrous acid in 100 grains of water. It should be kept in India-rubber bottles or glass bottles coated with wax. The dose of the alkaline fluorides is from a quarter of a grain to 3 grains.

Dr. Waddell's results may be briefly summarised as follows.

1. From the corrosive action of hydrofluoric acid and the fluorides on glass vessels, their use is beset with difficulties. 2. The topical action of the acid is attended with most acute pain. It penetrates deeply, producing a sore which heals with difficulty. 3. The fumes of the acid when inhaled provoke dyspnœa and spasmodic cough, and, if concentrated, intense bronchial and laryngeal irritation with spasm of the glottis. 4. The alkaline fluorides are not absorbed through the skin; their remote action is identical with that of the acid. 5. Small doses after a time impair the appetite; moderate doses induce nausea, whilst large doses give rise to vomiting from a direct caustic action on the mucous membrane. 6. The fluorides profoundly modify the constitution of the blood, producing an anæmia, the essential characteristic of which is that the red corpuscles suffer a decrease out of all proportion to the hæmoglobin. The extent of this numerical reduction of the red corpuscles, even when small doses are given, is very great; but with large doses it is enormous. The corpuscular loss is probably due to undue stimulation of the disintegrating function of the spleen. 7. A depression of the circulation is a constant and characteristic effect of the fluorine compounds. 8. In epilepsy, these drugs are of no value; and in phthisis, mitral disease, and aortic regurgitation, they are positively hurtful. 9. In soft vascular goîtres fluorine is of use, if persisted in; but the reduction seems to be a consequence of the general anæmia produced, rather than the result of any special action on the cervical sympathetic. 10. In the chronically enlarged spleen of malaria, when of recent origin, reduction in size readily occurs under the fluorides; but this is effected at the expense of considerable anæmia. The fluoric anæmia must be carefully watched, and prevented from going too far. Iron fluoride is of no value. Quinetum, or quinine fluoride, is the best salt. Fluorine is contra-indicated in every case where grave adynamic symptoms are present.

Dr. Waddell's work is of considerable interest, and deserves careful consideration. In connection with this subject, reference may be made to an article by Dr. Da Costa on the fluorides in medicine, an abstract of which was given in the LONDON MEDICAL RECORD, of December 15, 1881.

WILLIAM MURRELL, M.D.

ARTICLE 2783.

The Treatment of Backward Displacements of the Uterus and of Prolapsus Uteri by the New Method of Shortening the Round Ligaments. By WILLIAM ALEXANDER, M.D., M.Ch.Q.U.I., F.R.C.S.England, Visiting Surgeon to the Liverpool Parish Infirmary. London: J. & A. Churchill. 1884.

DR. ALEXANDER'S operation is based on a theory regarding the agencies which support the uterus, which many accept and many consider to be fallacious. Its principle is explained by the title of this work. A reference to the literature of the subject will be found in the LONDON MEDICAL RECORD, May 1884, p. 216, in a note on an article on this operation by Dr. Lediard. Dr. Alexander believes that in the healthy subject the uterus never hangs suspended in the pelvis by the round ligaments, but is always supported by the adjacent tissues, so that the strain on the ligaments is seldom sufficient to stretch them; but in cases of uterine displacement they can be made use of for the purpose of holding the uterus in place. The operation consists in exposing the external abdominal ring, dividing the intercolumnar fibres, and raising the exposed round ligament with an aneurism-needle. Both ligaments having been secured in this manner, the uterus is placed in its natural position by the sound, and maintained in that position by an assistant, while the ligaments are pulled out until they are felt to control the position of the uterus. They are then held in position by two or three silver or catgut wires, passed through the substance of each ligament and through the pillars of the ring on each side of it. Lastly a Hodge's pessary is

passed into the vagina, and the sound is withdrawn. The author does not adopt Dr. Lediard's practice of twisting the ligament round a stick and retaining it outside the wound. He publishes full notes of twenty-two cases; in twelve of these, there was prolapse with or without marked retroversion or retroflexion, in three retroflexion, in five retroversion, in two retroversion and retroflexion. In five of these cases, which were seen and examined two years after operation, the good results were permanent. One of these was in an epileptic, aged 24; both vertebral arteries had been tied in succession without complete cure, the uterus was found to be retroverted, and Dr. Alexander replaced it by the new method in March 1882. The fits have never recurred, and she has had a child since the operation. In another epileptic case, the nervous symptoms were unrelieved by the operation, though the displacement, retroversion and retroflexion, was overcome, and the pelvic symptoms, which it appeared to have caused, had disappeared. In two cases, the author endeavoured to remove the ovaries by pulling them out through the groin by the round ligaments. He did not find this proceeding satisfactory, as the ovaries cannot be drawn out if adherent, and if not adherent, though they can be easily pulled out of the inguinal canal, their pedicles cannot be easily or safely ligatured. Dr. Alexander, who puts forward the claims of his operation with great moderation, devotes a chapter to the experiences of other surgeons.

ALBAN DORAN.

ARTICLE 2784.

Illustrations of the Influence of the Mind upon the Body in Health and Disease, designed to elucidate the Action of the Imagination. By D. HACK TUKE, M.D., &c., &c. Second Edition, 2 vols. London: Churchill. 1884.

THIS new edition will be welcomed by many readers, as it brings up to date a book almost unique in its way. A lucid exposition is given of a class of facts too apt to be regarded as isolated and anomalous. Dr. Tuke's 'Illustrations' will afford a secure grasp of a far-reaching law of our nature. The importance of being acquainted with this law and with its consequences can scarcely be over-estimated; and ignorance or disregard of it not unfrequently vitiates the inferences of distinguished men of science. A perusal of this work might be recommended to spiritualists and to metallo-therapeutists as a corrective to their mental digestion.

Every page exhibits the author's great learning and his faculty of keen criticism. Novel facts and ingenious interpretations supply us not merely with a useful reference book, but with the means of whiling away an occasional pleasant half-hour.

WILLIAM R. HUGGARD, M.D.

ARTICLE 2785.

Memoirs of Life and Works. By C. J. B. WILLIAMS, M.D., F.R.S., Physician Extraordinary to H.M. the Queen, &c. Pp. 522. London: Smith, Elder, & Co. 1884.

IT is now nine years since Dr. C. J. B. Williams retired with honour from the cares and labours of an active professional life, and took up his residence at Cannes. From his retirement he has sent forth this interesting volume, prefacing it with the following words:—

'In offering to the Profession and to the Public these memoranda of the life and labours of a hard-working physician, extending over a period of upwards of sixty years, I think that I am performing a duty, incumbent on all, to make known experiences which have been neither few nor unsuccessful, in relation to the science and art of medicine, and may not prove uninteresting in regard to its history.'

The volume before us is, in fact, an autobiography, in which Dr. Williams not only lays before the reader many facts of his private life, but indicates the share he has in past years taken in the improvement of the science and practice of medicine. It is impossible, in the limited space at our disposal, to supply anything like an adequate analysis of the contents of the book, or to give expression to the reflections which it suggests. It must be read to be thoroughly appreciated. All that can be done here is to notice briefly some of the more salient points.

Dr. Williams was born early in the present century at Heytesbury, in Wiltshire, where his father was a clergyman. He was one of a large family, and was educated at home until he proceeded to his professional studies in Edinburgh. From his early youth he had a special liking for physical science, and the knowledge which he thus obtained, even while yet a boy, was of great value to him in subsequent years in his medical labours. Having graduated in Edinburgh, he spent a winter in London, and then proceeded to Paris, where he became a pupil of several of the great teachers of the day; especially Laennec, whose teachings with regard to the physical diagnosis of diseases of the chest he did much to render popular in the profession, at the same time that his knowledge of acoustic science, in which his great teacher was comparatively deficient, enabled him to give them greater precision. After his return he made a voyage to Madeira, in charge of a gentleman who was supposed to be suffering from an affection of the throat; but whom Dr. Williams found, by the application of the new method of physical examination, to be the subject of phthisis—a diagnosis which was not long afterwards confirmed by the patient's death. After his return he prepared, in 1828, his first work, in which he attempted to explain the physical signs of diseases of the chest by reference to physical laws and a sound knowledge of physiology and pathology.

In 1830, Dr. Williams married, and settled in London, becoming a 'Licentiate' of the Royal College of Physicians. With regard to the term 'Licentiates' or 'Permissi,' Dr. Williams regards it as one of degradation, indicating that its holders were inferior to the Fellows. For many years past it has been superseded by the title of member. Soon after he settled in London, he was engaged to write articles for the *Cyclopædia of Practical Medicine*, edited by Drs. Forbes, Tweedie, and Conolly. To this he contributed articles on Bronchitis, Catarrh, Coryza, Expectoration, Incubus, Irritation and Counter-irritation, Malformations of the Heart, Obesity, Pneumonia, and Stethoscope. An analysis of these articles is given by the author in the present work.

After several years spent in establishing, slowly but steadily, a physician's practice, and in the investigation of several interesting problems of chemical and physical science, Dr. Williams was appointed in 1836—it may be said suddenly—to the important post of Professor of Medicine and

Clinical Medicine in University College, and First Physician to University College Hospital. The offices had become vacant through the removal of Dr. Elliotson, who had caused dissatisfaction by his proceedings in the hospital with regard to mesmerism. Dr. Williams at once devoted himself to his duties with conscientious zeal, bringing with ability his scientific and practical knowledge to bear on them; and he gained his reward in the large classes which attended his lectures, and in the number of pupils who have since risen to eminence in the profession. These, and many other of his old pupils, he takes the opportunity of mentioning in kind terms. He held the professorship and the office of physician to the hospital until 1849, when he retired; his reputation as a physician having long been established, and his practice increased. At the same time, it is to be observed with regret, that impaired health was one factor leading to his retirement.

From the time of his relinquishing professorial duties up to the time of his retirement from professional life, Dr. Williams was engaged in a large private practice, for details connected with which we must refer the reader to the book. Always ready to promote any undertaking that had for its object the advancement of medical knowledge, he readily accepted the proposals made to him to become the first president of the Pathological Society of London, and some years afterwards of the New Sydenham Society; at a later date he was elected president of the Royal Medical and Chirurgical Society.

In addition to the writings to which we have already referred, he brought out in 1843 a work of very high value to the student, on the *Principles of Medicine*. This book has since passed through two editions (in 1848 and 1856). He also, in conjunction with his son, Dr. Theodore Williams, published in 1871 a work on *Pulmonary Consumption*.

We must pass over much interesting matter, and bring this imperfect review to an end; heartily recommending the book to the attention of our readers. They will there find the record of work carried on often, at first especially, under difficulty; and they will be able to trace the author's career, always guided by high motives of honour and conscientious principle, and always marked by the desire to do good, onwards to the position which he has long held, that of one of the most honoured and esteemed among British physicians. If, in the course of years, some enterprising mind should undertake the gigantic task of summarising the advances of medicine in all its branches during the century into the form of a history, the name of Dr. C. J. B. Williams will occupy a very high place of honour among the contributors to progress; and the work which lies before us will afford much trustworthy and valuable material.

NEW INVENTIONS.

ARTICLE 2786.

IMPROVEMENTS IN CELLULOID INSTRUMENTS.

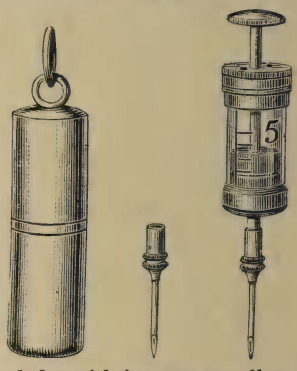
THE patentees of this material, eminently adapted for the construction of surgeons' instruments, have submitted for our inspection their new Web-lined Bougies and Catheters. These are lined with a carefully woven web, producing extreme flexibility and toughness; the surfaces are highly polished to render the introduction easy and painless.

The same firm manufacture Vaginal Speculæ in Celluloid. They are made in four sizes and two shapes—viz., Ferguson's and Davis's. The transparent speculæ allow a view of the walls along their whole length, whilst those coloured milk-white are possessed of great reflecting power. They are clean to use, exceedingly light, and, above all, unbreakable.

ARTICLE 2787.

A NOVEL SUBCUTANEOUS SYRINGE.

MESSRS. JOSEPH WOOD & CO., of York, are making an extremely neat and useful novelty in the shape of a watch-chain charm containing a subcutaneous syringe. The annexed diagram is of the actual size of the instrument. The syringe is graduated to



5 minims, and fits with its two needles into a neat gilt case, with double swivel ring to permit its being attached to the watch-chain. When in this position, it is ready for any emergency, and is not likely to be forgotten. Its moderate price should prove a recommendation.

MISCELLANY.

A COFFIN BURSTING AND KILLING A MEDICAL MAN.—In the *British Medical Journal*, April 1884, p. 738, the following remarkable occurrence is reported. An old woman died rather suddenly; so, several days after she was buried, a *post mortem* examination was ordered. While attempting to open the lid, the coffin burst with a loud noise; one of the boards, striking a police-inspector, knocked him down. Dr. M'Donald, medical officer in attendance, fainted, and remained in an unconscious state for some time; and such was the effect of the shock upon his system, that, although able to carry out the examination later on, he died shortly afterwards. He was about thirty years of age. Dr. Black, who was also present, was made seriously ill.

WASHING OUT THE BLADDER.—In the *Lancet*, March 1884, p. 599, a letter appears from a layman entitled 'Washing out the Bladder.' The author relates how he washes out his own bladder night and morning with the greatest ease and comfort. An ordinary red India-rubber catheter is used, and a two-ounce stopcock elastic syringe is filled with lukewarm water, flavoured either with a tablespoonful of quinine solution or dilute carbolic acid. The writer says that often a bubble of air enters the bladder, and, though his doctor warned him against such a mishap, he suffers no harm from it.

The London Medical Record.

Article 2788.

SONNENBURG ON THE VALUE OF SAYRE'S PLASTER JACKET.

This paper and the discussion thereon are of value, as showing the state of opinion in the capital of the German Empire after six years' experience of Sayre's jacket. Sonnenburg's experience extends to 205 cases and 600 jackets, exclusive of private cases. Of the 205 patients, 183 were scoliotic; of these 183, 166 were girls. The primary curve appears to him to be usually lumbo-dorsal. Lower curves are more favourable for treatment than higher, being more easily extended. With regard to angular curvature, he has seen very evil consequences of extension—*e.g.* death in consequence of compression of the spinal cord and trachea by a large abscess which lay alongside the spine. He says that the extension causes abscess. But he uses the jacket after the painful stage has abated, especially when the fear of abscess has passed away. The conditions required in an appliance for scoliosis are better fulfilled by the plaster jacket than by any other apparatus.

Dr. E. Küster spoke from an experience of about 200 cases in which the plaster jacket had been used. With regard to the place of the primary curve, his observations led him to believe that it was lumbar in most rachitic cases, and dorsal in most cases of 'habitual' scoliosis. In the beginning of the latter he employed and would recommend Beely's felt corset. In all other cases he preferred plaster of Paris. He had obtained good results even in severe rachitic cases; at all events, marked improvement. But the treatment, of course, extended over a very long time, occasionally two years or more. In kyphosis (Pott's curvature) he has found Sayre's jacket excellent, and had seen no abscess which could be attributed to the treatment.

Dr. Sonnenburg's evil experiences reminded him of Sayre's warnings as to the necessity of gentleness and moderation in the use of extension for cases of angular curvature. With regard to resulting muscular atrophy, we did not take that into consideration when treating inflammation of the joints of the limbs by prolonged fixation, nor need we when so treating spinal caries. The treatment should be continued until ankylosis seemed to have happened. Afterwards, for a time, he employed the felt jacket.

Dr. Israel supported Küster's statement in every respect. He also found better results from the plaster jacket when treating angular curvature than when employed for lateral curvature. For the former he regarded the plaster jacket as an immobilising apparatus, and for the latter as an apparatus for extension. For caries of the lowest lumbar vertebræ, he enclosed the thighs as well as the trunk in plaster. In one case, with double psoas abscess and paraplegia, he carried the plaster down to below the knees; paralysis and abscesses disappeared, and the patient, half a year afterwards, walked (and continued to walk) without any support.

Dr. Eulenburg, sen., said that extension was dangerous and Sayre's jacket useless for cases of angular curvature. The former must cause a vacuum with its dangerous consequences. The plaster jacket, in his opinion, did not maintain extension. The tendency to bony union, the natural end of spondylitis, was prevented by separation of the diseased surfaces. Dr. Israel's case was a very striking one, but the result might be due to complete horizontal rest rather than to the plaster jacket. After some remarks on the evils associated with the plaster jacket, according to his experience, *e.g.* pressure sores, &c., and after observing that its application without extension was inconsistent with the essential principles of Sayre's treatment, he stated that observation of some thousand scoliotics convinced him that half commenced in the lumbar segment and half in the dorsal. With regard to rachitic scoliosis, it four times out of five manifested itself as an extensive curve with convexity to the left, and most usually including dorsal vertebræ only. Rachitic cases could only be successfully treated in the earliest years. He employed absolute horizontal rest, using a suitable apparatus. But he believed that these cases must offer a rich field for the use of the plaster jacket, as the spine could, in them, be easily stretched straight.

Dr. J. Wolff pointed out that in the case of young rapidly growing children the action of a fixed apparatus was especially powerful and rapid. The necessarily prolonged use in the case of older people brought in its train many evils. He praises water-glass corsets, which he made upon a cast of the patient. With them he combined pressure on the hump.

Dr. Küster said that if any vacuum to be filled with blood was produced by extension, it could only be when the latter was forced and excessive.

Dr. Güterbock bore testimony to the gentleness with which Dr. Sayre used extension in cases of angular curvature at the time when he first introduced his plan to Europe (1877). Güterbock preferred, as a material, water-glass; but whatever kind of corset he had used, he could not speak to such favourable results as most of the preceding speakers. Only in spondylitis had the treatment produced brilliant results. The next most favourable were in moderate degrees of scoliosis in adolescents. Wholly bad had been the results of the treatment when applied to young rachitic cases.

In the course of Dr. Sonnenburg's reply, he observed that rickets might come on at any age. For movable corsets he preferred leather as a material, rather than felt or water-glass.

C. B. Keetley.

Article 2789.

KEMPF ON THE CONTAGIOUSNESS OF CONSUMPTION.

Dr. E. J. Kempf relates (*Louisville Med. News*, March 22, 1884) the following history. In the beginning of the year 1880 the Sisters' Convent in the village of Ferdinand was entirely free from consumption. The order is a very austere one. The sisters live a very secluded life, they take but little exercise, they are strict in their habits, and very cleanly. The convent is well ventilated, lies high and dry, and is well drained. The candidates of the sisterhood are derived from the surrounding country, and are daughters of farmers and labourers. Before they enter the convent they are generally noted for

their piety and reticence as well as their want of bodily strength and vigour. Professor C. Knapp, now of Evansville, the former physician of the convent, had no case of pulmonary phthisis in the convent at the time of his resignation as attending physician. His general run of diseases consisted of fevers, hysterical cases, and the derangement of the uterine functions—whites, irregular menstruation, sequels of their secluded life.

In the fall of 1880 I was consulted by one of the sisters, a young girl about 18 years of age, on account of a cough or pain in the breast, and a feeling of general malaise. The girl comes from a family which I would not call healthy. One of her brothers has a deformed breast, a so-called pigeon-breast, a sign of a scrofulous diathesis. A brother died of consumption.

On examining the patient, I found dulness and bronchial breathing in the apices of both lungs, as if from tubercular deposit, difficult breathing, hacking cough, indifferent appetite, sleepless nights, tired and weary limbs, and a daily fever. I pronounced the case one of consumption, and prescribed accordingly.

The case went on to the second stage. The patient has not been isolated; she sleeps in the general dormitory as formerly. One sister after another now commenced to complain with similar symptoms, as described in the first case, and in four months after the first sister was seized with the disease I had nine cases of consumption under my care, sisters that were formerly thought to be exceptionally healthy.

Four sisters died of the disease in the course of a year, Sisters Angela, Dorothea, Brigitta, and Ida, and five are still sick with the disease. Two of the remaining five cases are dying, and the other three have taken the chronic form of the disease, and may linger for months or years. The director of the convent afterwards took energetic means to isolate the sick and to send away the ailing, and the epidemic was stopped. ROBERT SAUNDBY, M.D.

ARTICLE 2790.

BRISTOWE, HUMPHRY, HUTCHINSON, AND BALLARD, ON DR. CORY'S EXPERIMENTS IN VACCINATING HIMSELF FROM SYPHILITIC CHILDREN.

THE following abstract of a report by a committee, consisting of Dr. Bristowe, Dr. G. M. Humphry, Mr. Jonathan Hutchinson, and Dr. Ballard, is taken from the *Supplement to the Twelfth Annual Report of the Local Government Board* (1882–83). Dr. Cory's object in experimenting on himself was 'to test a current belief that vaccine lymph taken from a syphilitic person, if unmixed with the blood of the vaccinifer, does not contain the syphilitic virus, and is incapable of imparting syphilis by its inoculation.' The particulars were obtained by the committee from notes reported by Dr. Cory, and from inquiries made by themselves.

The first experiment was made in 1877 or 1878. The vaccinifer, aged 8 months, was considered by Dr. Cory to be unquestionably syphilitic, but had no obvious signs of active syphilis at the time. The lymph was taken on the eighth day from vesicles normal in appearance, but delayed in development. Dr. Cory vaccinated himself in one place above the left wrist, particular care being taken to avoid the admixture of blood with the lymph. Vaccinia followed, but no syphilis.

Second experiment, Nov. 5, 1879. The vaccinifer, a male, aged 85 days, had active symptoms of syphilis, and had been under mercurial treatment for four days. The lymph was taken on the eighth day from good vesicles, with great care to avoid admixture of blood. The result was unsuccessful both as regards vaccinia and syphilis.

Third experiment, May 11, 1881. The vaccinifer, a male, aged 4½ months, had no signs of syphilis when six weeks old, but at the age of three months had roseola and mucous patches. Rapid improvement took place under mercury. The lymph was taken from normal vesicles on the eighth day, and, as before, with the greatest care to avoid the presence of blood. Neither vaccinia nor syphilis followed.

Fourth experiment, performed July 6, 1881, by Mr. Haslam, at Dr. Cory's request. The history of the vaccinifer, a female child, aged 84 days, was that soon after birth she had had 'thrush,' and, when ten days old, 'snuffles.' At the age of four weeks an eruption appeared on the arms, and was still present when the experiment was performed, at which time there was also a sore on the right buttock, and a sore in the left nostril. There were five vaccine vesicles on the child's arm, normal in appearance, and not inflamed. The immediate neighbourhood of the vesicles was free from the syphilitic eruption. Dr. Cory took the lymph on an ordinary lancet. The first vesicle which was opened bled. The lancet was then wiped clean and another vesicle punctured. This did not bleed. Lymph exuded spontaneously in a bead, from which Dr. Cory charged the lancet without pressing the vesicle. The lancet was only charged once. Dr. Cory then handed the charged lancet to Mr. Haslam, who vaccinated Dr. Cory in three places on the front of the upper part of the left forearm. On July 7, the three places were red with small areolæ, which were declining next day. Six days later they were quite healed. The vaccination was unsuccessful. On July 26 (21st day), Dr. Cory observed that two of the places (probably those last vaccinated) were red, and had each formed a small red papule. These papules grew slowly until August 4, when the upper one began to desquamate, and when the scab fell from its centre this appeared slightly moist. The papules now grew more quickly, especially the upper one, and occasionally a slight areola appeared round each. On August 8, a little yellow spot appeared in the centre of the upper one, and by the next morning a scab had formed over it. The lower papule was also growing more rapidly. August 11.—The scab was removed from the upper spot and a little ulcer was revealed. The lower papule remained dry. Dr. Cory now showed his arm to Dr. Humphry and Mr. Hutchinson, both of whom considered the spots to be syphilitic. At Dr. Cory's request both spots were excised on the same day by Dr. Humphry with antiseptic precautions, the incisions embracing some of the adjoining sound skin. The edges were brought together with needles. 12th. The edges of the incisions had united and the pins were removed. 14th. The lower place was a little inflamed. 17th. For the first time a gland was felt in the axilla. It was not painful on pressure. The antiseptic bandage had not yet been removed. 18th. When the wounds were dressed they appeared dry. The lower one was inflamed and indurated, and the

places where the pins had been had sloughed. 20th. There was severe pain in the axilla. Two glands were enlarged and one was very painful when pressed. There was a feeling of tightness about the chest. 21st. Dr. Cory felt ill, with a peculiar oppression about the sides of the chest and between the shoulders. The axilla was very tender. Antiseptic dressing was left off. 22nd. The induration of the lower wound was less, and axillary pain much less. Water dressing was applied. 23rd. The upper wound was healing; the lower one was not now indurated. He felt ill. 24th. The wounds were doing well, but axillary pain was very severe. There was a tender spot in the middle of the sternum. 25th. He began to take 5 grains of mercurial pill daily. 26th. He sweated much during the night. 27th. He had rheumatic pains; but slept better. The upper wound was healing rapidly; the lower one stationary. 29th. Towards evening the throat felt very sore. 30th. The glands of the neck were painful, and movements of the head caused pain. 31st. He felt better. For the first time roseola was noticed on the forehead, temples, back of the neck and below the ears, also on the lower part of the abdomen. The eruption lasted four days. Dr. Cory now placed himself fully under antisyphilitic treatment.

In their comments on the cases, the committee remark that 'it is conclusively proved by Dr. Cory's experiments that it is possible for syphilis to be communicated in vaccination from a vaccine vesicle on a syphilitic person, notwithstanding that the operation be performed with the utmost care to avoid the admixture with blood.' They also call attention to the fact that the infants from whom Dr. Cory took his lymph were, in all cases but one, subjects in whom active symptoms of syphilis were unmistakably present, and therefore in such a condition as would certainly have precluded their use as vaccinifers by even an inconsiderate and reckless vaccinator.

The medical officer of the Local Government Board also appends a note to the report, in which he remarks that Dr. Cory's result does not give any new rule for the guidance of the practitioner, for whom the obligation, as laid down in the Board's instructions to public vaccinators, will remain as before; namely, to 'take lymph only from subjects who are in good health,' and to 'always carefully examine the subject as to any existing skin-disease, and especially as to any signs of hereditary syphilis.' The result of Dr. Cory's experiment, in which this rule of practice was necessarily disregarded, does not at all effect the conclusion arrived at from long continued experience of properly conducted vaccination; that the observance of the above rule is in practice a sufficient safeguard against the transmission of syphilis.

ARTHUR COOPER.

ARTICLE 2791.

MOLLIÈRE, BULL, AND OTHERS, ON ETHER ADMINISTERED BY THE RECTUM.

THE question of rectal etherisation is just now attracting much attention, and the medical journals abound in notes and comments upon the new method, with occasional reports of cases by surgeons who have given it trial.

A report by M. Mollière, surgeon in chief of the Hôtel Dieu, Lyons, published in the *Lyon Médicale* of March 30, suggested the procedure. This was reproduced in several of the leading English and American journals, and, being charmed by the Frenchman's report, and finding the method easy of application, several of our American surgeons have put it into practice with doubtful results.

Mollière was indebted to Dr. Yversen, of Copenhagen, for the suggestion. He administered the ether by means of a double tube and Richardson's atomiser, and alleges that he obtained 'with a small quantity of the drug' a degree of anæsthesia, in several cases, which admitted of his performing painlessly and successfully some major and minor operations. The report states that, 'in order to obtain deep anæsthesia with a very small quantity of ether, it suffices to introduce a caoutchouc tube into the rectum, and to connect this with the ether flask, placed in water at from 40° to 60° C.' (104° to 140° F.).

The advantages claimed for the new method are, that the dose employed is reduced to a small quantity and can be accurately measured, avoiding waste; that it suppresses the stage of excitement; that it does not give rise to the usual sense of suffocation; and that the odour, so disagreeable to some patients, with other necessarily objectionable conditions attendant upon its administration by inhalation are done away with; while in operations upon the face the apparatus for administration is, of course, out of the surgeon's way.

Mollière reports six cases, in all of which it is stated that the ether acted promptly, the anæsthesia being deep, and that, with the exception of one patient who vomited on awaking, no nausea or other disagreeable symptom was noticed.

The *Louisville Medical News* points out the above would seem to make out a strong case in favour of the new over the old method of administration; but from the experience of several surgeons who report the results of their experience with it, rectal etherisation has disadvantages and dangers which should serve as a warning against its indiscriminate use, if they do not condemn the practice *in toto*.

Dr. Bull, Surgeon to the New York and St. Luke's Hospitals, publishes, in the *New York Medical Record* of May 3, an analysis of seventeen cases of rectal etherisation. In five of these the inhaler was used, as supplementary to the rectal tube, in consequence of excitement, tardy, or incomplete anæsthesia, while in one the anæsthesia was produced first by inhalation and continued by the rectum. The smallest amount of ether used was one and a half ounces, the largest six ounces. In all of Dr. Bull's cases, save two, one or more of the disagreeable symptoms usually noted during or after etherisation by inhalation was present, with the addition of a new complication in one-third of the number. While all the patients escaped the sense of suffocation, and but one suffered from subsequent nausea, the stage of excitement was more or less pronounced in nine, in one being so violent that the patient jumped from the table. Ten vomited during or just after etherisation, and in seven there was immediate or subsequent diarrhœa, the stools being large and loose, in number varying from three to fourteen, and in two instances containing blood.

In the same issue of the *Medical Record* is a letter from Dr. James B. Hunter, who notes briefly six cases

in which, save a movement of the bowels during the etherisation in one, and fear of too much distension for the successful performance of the operation (ovariotomy) in another, which caused him to resort to the inhaler, the method of rectal administration was successfully employed without any attendant or subsequent unfavourable symptoms.

The experience of Dr. Robert F. Weir (same issue of the *Record*), on the other hand, is quite unfavourable to the new device. He reports two cases. In one, though the patient became sleepy and had stertorous breathing, insensibility was not attained after a trial of fifteen minutes, and the anæsthetic had to be given by inhalation. In another, a child eight months old, the action of the drug was prompt, but the bowels became somewhat distended, through a too rapid vaporisation of the ether. This excess of vapour, however, readily escaped by the anus, and, though at the end of the operation the child was depressed, it soon rallied under stimulants. During the night, however, it had several bloody stools, and died on the following morning. In this case, less than two ounces of ether was used.

From the above it will be seen that the new avenue to the centres of pain is not without its stumbling-blocks, and that the propriety of resorting to rectal etherisation before a careful physiological investigation of the subject is made is doubtful, to say the least. Theoretically there are anatomical, physiological, and mechanical reasons why rectal etherisation may be looked upon as a rash and dangerous measure, which should be thoroughly tested upon the brute before it is applied to man. Among these may be mentioned—first, tardy action of the drug because of the long route which it must take through the mesenteric, portal, and hepatic veins, vena cava inferior, heart, pulmonary arteries and veins, starting in one and passing through two other sets of capillaries before it can enter the general arterial system; second, the damage it may do through reflex action (or directly by diffusion) to the great splanchnic nerve-centres, leading to blood-stasis and the arrest of physiological function in the intestines, as evidenced in some of the cases by symptoms of collapse, with large and sometimes bloody stools; third, the difficulties in manipulation, such as the condensation of the vapour in the tube before it enters the gut, or, if the water be too hot, an enormous liberation of vapour which overdistends the bowels, with peril to the patient and annoyances to the surgeon and his assistants, which are all too clearly demonstrated in some of the cases under notice. These difficulties will possibly be met in due time, and rectal etherisation may yet become a beneficent surgical procedure; but it is to be hoped that our ambitious young surgeons will be content with the old way, until the advocates of the new can give us more positive evidence of its safety and utility.

ARTICLE 2792.

PILOCARPINE IN THE TREATMENT OF ASCITES CAUSED BY DISEASE OF THE LIVER.

ASCITES caused by cirrhosis of the liver has not been very amenable to treatment up to this time. Most physicians have therefore come to the conclusion that paracentesis was the only resort. Drastics and diuretics had to be abandoned as inefficient; and, in fact, there seemed to be little hope left for this class of sufferers. Harley and Roberts allege that repeated paracentesis promises good results; while, on the other hand, there are those who have never accomplished anything by puncture. Mackenzie reports two cases as cured by means of flannel bandages, tightly wrapped around the abdomen. Siegnit combines with the bandaging faradisation of the abdominal muscles. From all the different reported cures, one can readily understand that the treatment of ascites caused by disease of the liver has been quite unsatisfactory, and most of the cases have been treated on the expectant plan.

During the year 1880, the author (a writer in the *Mittheilungen des Vereins der Aerzte*, signing himself T.) treated a case of this kind by all the remedies that have been recommended in the books without any results. Finally paracentesis was resorted to, but with each operation matters grew worse, and the quantity of liquid steadily increased. It occurred to him to administer pilocarpine immediately after an operation, to prevent or give other course to the serous exudation that each time was emptied into the peritoneal cavity. The patient received twice daily 15 milligrammes ($\frac{2}{9}$ grain) of pilocarpine for six consecutive days, with the effect of causing profuse diaphoresis and discharge from the salivary glands. Stimulants (whiskey, 60 grammes [℥ij.]) were given the patient to counteract the weakening action of this medication. From the administration of the first dose the ascites diminished, and the patient was finally discharged from the hospital as cured. Three months later the patient was examined, but did not discover a symptom indicating disease of the liver or ascites.

Another case the author treated in conjunction with Dr. Haas. The diagnosis was an enormous ascites caused by cirrhosis of the liver. The swelling was so great that it caused dyspnœa, for the relief of which paracentesis was made a few times and 20 to 30 litres (5 to 8 gallons) of fluid were removed. The effect was not lasting. Finally, the respirations ran 38 and the pulse 118 per minute; the urinary secretion was entirely suppressed. After a consultation, it was determined to employ large doses of pilocarpine, since the case seemed hopeless. The patient received twice daily 0·01 gramme (gr. $\frac{1}{6}$) of pilocarpine in a large dose of whiskey, besides some solid food. This drug did not seem to act so favourably in this case, diaphoresis being very scanty. Two weeks later, after another puncture, the dose of pilocarpine was increased to 2 centigrammes (gr. $\frac{1}{3}$) and followed by a large quantity of whiskey, with the result of causing profuse sweating. Powdered jalap with cream of tartar was given in conjunction for the constipation. The patient gradually recovered, when he was discharged, and he was as healthy as before.

If the good results obtained in these two cases do not indicate much, they may cause other observers to try the pilocarpine treatment. Paracentesis often does not only do no good, but seems to do harm. Both of these patients were very much weakened, and it seems almost incredible that they could tolerate 2 centigrammes ($\frac{1}{3}$ grain) of pilocarpine twice a day; but possibly the large doses of stimulants given shortly after did much to obviate the depressing effects of the pilocarpine drug.

Article 2793.

MOORE AND OTHERS ON AN EPIDEMIC OF SCARLET FEVER.

In the Transactions of the Academy of Medicine in Ireland, of date February 14 of this year (*Dublin Med. Jour.*, May 1884), some particulars are given regarding the epidemic of scarlet fever then existing in Dublin. Dr. J. W. Moore, physician to the Cork Street Fever Hospital, Dublin, opened the discussion. He pointed out that scarlet fever obeyed in Dublin the law observed to hold in England—viz., that it shows a well-marked tendency to increase in the last six months of the year, and attains its maximum in the December quarter. He observed that while a mean temperature of 60° is favourable to the spread of scarlet fever (as Dr. Ballard has shown), and a fall of mean temperature below 53° tends to arrest it, yet in Dublin in the winter months the mortality continues very high until the ninth week of the new year—that is, till the beginning of March ; and it remains high till the beginning of May. He believes the explanation of this fact to be diminished ventilation in the tenements of the poor during the winter months. The epidemic reached its greatest prevalence in October and November ; since then it has shown a tendency to decline. With regard to the origin of the epidemic, Dr. Moore states that in the report of the Cork Street Hospital for 1875 attention was called to the fact that nearly every epidemic of scarlet fever arose in the neighbourhood of Francis Street, Patrick Street, and the adjoining lanes and localities ; so in the present case, a majority of cases admitted came from Bride Street, Patrick Street, and Francis Street. The mortality in 1883 was 23·8, which fairly represents the death-rate during the epidemic. A table is given, showing the death-rate in the Cork Street Hospital among scarlet fever cases for ten years—1874 to 1883. There were 738 cases, and 149 deaths, equal to a mortality of 20·2 per cent. The mortality ranged in different years from 4·5 per cent. to 36·4 per cent., this latter being in 1879, a year of severe frost and great distress. If we may take the cases admitted into the Cork Street Hospital as typical of the severity of scarlet fever generally in Dublin, it is evident that it is a much more serious disease there than in London. In the report of the medical superintendent of the Homerton Fever Hospital for 1880 we find that the average mortality in scarlet fever for ten years, with a total of 3,046 cases, was 13·43 per cent. Dr. Moore calls attention to the high death-rate in children under five, 33 per cent. ; and between five and fifteen it is 21 per cent., and contrasts this with the mild nature of typhus fever in children. The prevailing type of the disease was scarlatina anginosa, and many cases suffered from neglect in the earlier stages. Some were admitted during the stage of desquamation. As illustrating the danger to the public health arising from the exposure of infectious patients in the streets, Dr. Moore said that one day he noticed a woman carrying a pale-faced delicate child. He stopped her to look at the child, and found it was 'peeling.' The mother was going to the dispensary to get advice for the child. He advised her to take it to the Fever Hospital, where the child would be carefully looked after, but his advice was not followed. Some patients died almost in a few hours from the malignancy of the poison, with appearances not unlike those characteristic of petechial typhus. As regards complications, nephritis was common during the cold weather. One man had scarlatinal diphtheria, but recovered under the use of sulphurous acid spray. Diffuse cellulitis was not an uncommon complication, and one case terminated in cancrum oris, and one case had erysipelas.

In the discussion which followed, Dr. J. E. Kenny said he had known death occur in a child of 13 thirty-six hours after the first symptoms. He thought moisture was an important factor in the spread of the disease. Dr. C. J. Nixon agreed with Dr. Kenny on this point, and agreed with Dr. Moore as to the frequency with which epidemics of scarlet fever and erysipelas run together. He had known a case die within forty-eight hours of the onset of the disease.

Dr. Fitzpatrick had known a case fatal after less than twenty-four hours' illness. The *post mortem* examination in this case showed slight effusion on the brain, with enormous congestion of the cerebral substance. Two of the family and a lady living in the house contracted scarlet fever from this case.

Dr. Kennedy had seen several cases fatal in from thirty to thirty-six hours. In India, Surgeon-Major Gore said, scarlet fever was very rare. It did not exist among the natives, whereas measles was very common.

In replying, Dr. Moore said there had not been any case of death under three days in the present epidemic. He remarked that small-pox and scarlet fever were closely related as regards their times of prevalence, and that there seemed to be a strange susceptibility to the poison of scarlet fever by those recovering from small-pox and conversely. We are inclined to doubt whether this has ever been proved, at least as regards the susceptibility of small-pox patients to scarlet fever. We have known a patient desquamating from scarlet fever who had contracted small-pox treated in a ward full of small-pox patients, and yet not a single one took scarlet fever. Dr. Grimshaw thought that the liability of small-pox patients to get scarlet fever arose from the great diffuseness of the poison of scarlet fever, rather than from any predisposing liability of the patients themselves. John MacCombie, M.D.

Article 2794.

BECHTEREFF ON THE FUNCTIONS OF THE OPTIC THALAMI.

In the *Vratch*, Nos. 4 and 5, 1883, Professor V. M. Bechtereff, of St. Petersburg, details the results of experiments on frogs, pigeons, hens, rabbits, and dogs, carried out by him in order to determine the functions of the optic thalami. The experiments consisted both in stimulation (faradisation) and destruction of the parts under consideration. Experimenting on dogs, the author found that the destruction of all parts of the thalami was followed by a visual disturbance ; but, while the destruction of the anterior part of the thalamus led only to a temporary (one or two days) affection of sight, that of the posterior produced a change in the animal's vision lasting for months after the operation. In the cases of the latter kind there was observed, namely, blindness of those halves of the visual fields which are heteronymous with (or opposite to) the side of destruction (or, in other words, there was seen the disappearance of the functions of those halves of the retinæ which are homonymous with the side of destruction). The

author found, further, that dilatation of the pupils, various forced movements, and disturbance of the equilibrium of the body, as they were observed by various writers in the course of their experiments on the optic thalami, did not depend upon the destruction of the thalamus itself, but were connected with a simultaneous lesion of the adjacent part of the grey matter belonging to the funnel region of the third ventricle (*see* also Dr. Bechtereff's article on 'Die Bedeutung der Trichterregion des dritten Ventrikels,' &c., in the *St. Petersb. Med. Wochensch.*, No. 12, 1882). The author never saw either any changes in the sensory sphere or motor paralysis following the lesions of the thalami; the experimenters who observed similar phenomena, probably simultaneously destroyed some nerve-fibres passing in the neighbouring part of the internal capsule.

Coming to another division of his work, the author states that the animals in which the cerebral hemispheres have been destroyed, but the thalami left in their integrity, are able to utter all the various sounds which usually serve them for expression of the emotions. These emotional sounds can be obtained in animals even after the destruction of the corpora quadrigemina, but they invariably cease to appear after the thalami have been destroyed. The animals with the hemispheres left intact and with the thalami damaged preserve full freedom of their movements, and are evidently able to normally receive all impressions, but they have lost their faculty to express emotions by means of due sounds and movements. Hence the author concludes that the optic thalami mainly serve as the centres for the production of emotional sounds and movements. As to the corpora quadrigemina, they have no relation whatever to this function.

V. IDELSON, M.D.

SURGERY.

RECENT PAPERS.

2795. MAXIMOVITCH, J., AND STARYNKEVITCH, A.—On a case of Volvulus; Enterotomy. (*Vratch*, 1883, No. 7, p. 108, and No. 8, p. 124.)

2796. BAIKOFF.—On Resection of the Pylorus for Cancer. (*Ibid.*, 1883, No. 8, p. 123.)

2797. VELIAMINOFF, N. A.—On a Case of Resection of the Pylorus for Cancer. (*Ibid.*, 1883, No. 8, p. 124.)

2798. MAKAVËËFF.—On Suprapubic Lithotomy. (*Ibid.*, 1883, No. 15, p. 234.)

2799. VELIAMINOFF, N.A.—On a Case of Gastrostomy for Cancerous Stricture of the Œsophagus. (*Meditz. Obozrenie*, Fasc. 5, 1884, p. 524.)

2800. AKIMOFF, N.—Two Cases of Sponge-grafting. (*Russkaia Meditzina*, No. 15, 1884, pp. 344-6.)

2801. MAZZINI, PROFESSOR.—Laparotomy for Intestinal Occlusion. (*Lo Spallanzani*, Fasc. 1 and 2, 1884.)

2802. WEIBEL.—Arrest of Primary Hæmorrhage after Amputation. (*Mittheil. aus der Chir. Klin. zu Tübingen*, 1883.)

2803. BRUNS.—The Prognosis of Spiral Fractures of the Long Bones. (*Centralbl. für Chir.*, No. 17, 1884.)

2804. WEIR.—Traumatic Aneurism of the Vertebral Artery. (*Archives of Med.*, April 1884.)

2805. WARREN.—Healing of Arteries after Ligature.

2806. ROBIN AND MOLLIÈRE.—The Treatment of Genu Valgum by Osteoclasis.

2807. Surgical Treatment of Scrofulous Adenitis of the Neck.

2808. VERNEUIL.—The Treatment of Congestion or Ossifluent Abscesses. (*Semaine Médicale*, Feb)

2809. JUILLARD.—Antiseptic Incision in Hydrocele. (*Rev. de Chir.*, Feb. 1884.)

2810. BIONDI.—Extirpation of the Lungs. (*O Correio Medico de Lisboa.*)

2811. MOLLIÈRE.—The Treatment of Stricture of the Urethra by Extirpation of the Indurated Tissues. (*Lyon Méd.*, No. 21, 1884.)

2812. RICHET.—The Treatment of Loose Cartilages in the Knee-Joint. (*Rev. de Thérap.*, No. 10, 1884.)

2813. ISRAEL, JAMES.—Paralysis of the Radial Nerve Cured by Operation. (*Deutsche Med. Wochensch.*, April 3.)

2814. VON HACKER.—Excision of the Pancreas. (*Ibid.*, April 3.)

2815. VON HACKER.—Excision of the Spleen. (*Ibid.*, April 3.)

ART. 2795. *Maximovitch and Starynkevitch on Enterotomy in a Case of Volvulus.*—Drs. J. Maximovitch and A. Starynkevitch report (*Vratch*, 1883, Nos. 7 and 8) the case of a man, aged 56, who was admitted on account of six days' constipation, with great tympanites and griping abdominal pain. On percussion, there were found dulness in the situation of the cœcum, colon, and sigmoid bowel, and a tympanitic note in other abdominal regions. Calomel with jalap, enemata with castor-oil and croton-oil, Hegar's high injections, and metallic mercury were successively used, and all failed. In view of the patient's general state becoming worse, on the eleventh day (of constipation), enterotomy after Nélaton's method was performed. An incision 6 centimètres long, was made 3 centimètres above, and parallel to, Poupart's ligament, 3½ centimètres inwards from the right anterior superior iliac spine. A coil of the ileum was caught, sewn to the abdominal wound, and opened, giving exit to fæcal fluid. Four hours later, vomiting and collapse appeared, and the patient died seven hours after the operation. On the *post mortem* examination, there were found about three pounds of sero-fibrinous fluid in the peritoneal cavity, old typhlitic and perityphlitic adhesions, adhesions between the root of the mesentery, mesocœcum, and mesocolon of the sigmoid portion, and semirotation of the latter round its axis.

2796. *Baikoff on Resection of Pylorus for Cancer.*—At a meeting of a Medical Society of St. Petersburg, Dr. Baikoff (*Vratch*, 1883, No. 8) reported the case of a woman, aged 38, who for three years had suffered from heartburn, eructations, and constant vomiting after every meal, and, of late, had become extremely cachectic and emaciated. The stomach was found much distended. In the situations of the pylorus there could be felt a hard, nodulated, movable tumour. The operation was performed under chloroform and carbolic spray, and lasted four and a half hours. A transverse incision, 12 centimètres in length, being made, the peritoneum was united with the skin. The tumour, 11 centimètres in length, 7 and 8 centimètres in breadth, occupied the pylorus and adjacent parts of the stomach and duodenum. The neighbouring glands were slightly enlarged, but not infiltrated. The tumour was isolated and gradually separated by scissors, first from the small curvature and then from the duodenum, the wound in the stomach being closed step by step with the removal of the new growth. The remaining part of the latter was cut away after the duodenum had been sewn up to the stomach. About a hundred vessels were tied

with catgut, and about eighty catgut sutures (Nos. o and 1) were used for closing the wound in the stomach and duodenum. The abdominal incision was treated after Lister's plan. The pulse after the operation was small and intermittent, but the patient soon recovered under the influence of a hypodermic injection of musk, camphor, and ether. There was no fever up to the third day, when a slight elevation of temperature occurred. On the fifth day the dressing was changed, several sutures being removed, and the patient, who had been up to the date fed through the rectum, began to take milk. On the seventh day, however, she died, after complaining of pressure and pain in the epigastric region. The *post mortem* examination showed that the stomach was distended with fluid, though the exit was entirely free, since the contents of the stomach passed into the bowel when the body was turned on its right side. The gastro-duodenal wound was firmly closed with adherent inflammation. The author thinks that the patient died from exhaustion and paralytic state of the stomach. The tumour was scirrhus, with partial transformation into medullary cancer.

2797. *Veliaminoff on a Case of Resection of the Pylorus for Cancer.*—Dr. N. A. Veliaminoff details (*Vratch*, 1883, No. 8) the case of an extremely emaciated and nervous woman, aged 42, who presented all symptoms of a movable cancerous tumour of the pylorus, and in whom Professor K. K. Reyher had excised the latter. The length of the transverse abdominal incision was seven centimètres. The tumour was removed as a whole, the gastric wound being closed by double (*i.e.* both by mucous and serous) sutures. The operation was conducted without spray, and lasted about four hours. By the end of the second hour of the operation, collapse appeared, and eight hours after the resection the patient died from exhaustion.

2798. *Makavëëff on Suprapubic Lithotomy.*—At a meeting of the St. Petersburg Medical Society, Dr. Makavëëff described (*Vratch*, 1883, No. 15), a successful case of suprapubic lithotomy with suturing the vesical wound. The author performed this operation eleven times with two deaths. One of the patients died from exhaustion, the other from facial erysipelas, which stood in no connection with the operation. Dr. Makavëëff thinks that, in antiseptic surgery, suprapubic lithotomy must be placed on the same level with the perineal operation. Its performance is simple, since the field of operation is always in view of the surgeon. Any wounding of the peritoneum may be avoided by injecting the bladder and dragging the peritoneal fold upwards. The author never saw any extravasation of urine; urine of an acid reaction is pretty well tolerated by the wound; if the reaction be alkaline, it may be changed by the internal administration of benzoic acid.

2799. *Veliaminoff on a Case of Gastrostomy for Cancerous Stricture of the Œsophagus.*—Dr. N. A. Veliaminoff, of Professor Reyher's clinic, in St. Petersburg, reports (*Meditz. Obozr.*, Fasc. 5, 1884) the case of a railway guard, aged 50, who suffered from cancer in the middle third of the gullet, and in whom he did gastrostomy (in two stages, with four days' interval). The patient got up on the third day after the operation, and four and a half weeks later he was shown to a meeting of the St. Petersburg Medical Society. Two months after gastrostomy he returned to his occupation. The patient died from cancerous perforation of a bronchus in the eighth month after the operation.

2800. *Akimoff on Cases of Sponge-grafting.*—In the *Russkaia Meditzina*, No. 15, 1884, p. 344, Dr. N. Akimoff, of Trubtchevsk, records two cases of torpid callous ulcer of the leg, which he successfully treated by aseptic sponge-grafting after the rules laid down by Professor Hamilton, of Aberdeen, (*see* the London Medical Record, 1881, Nov., p. 450) and Dr. Sanctuary (*ib.*, 1883, April, p. 133). In one of the patients, aged 19, the ulcer existed for three years, and was as large as the palm of a hand; in the other, a peasant girl, aged 20, the ulcer occupied the lower third of the leg and measured six inches by four. The slices of sponge were found adherent by the third day, after which a rapid formation of granulations and cicatrisation followed. The author differs from Professor Hamilton and Dr. Sanctuary as to the action of the pieces of sponge and their ultimate fate. He does not admit any organisation or subsequent absorption of the sponge-tissue, and attributes the success of the method partly to a gentle irritation of the surface of the ulcer produced by the sponge, partly to a thorough drainage as kept up by the porous substance, and finally, to the ulcer being all the time kept at an uniform warmth and moisture under due protection of a disinfected covering. [See also Case's paper in the London Medical Record, May, 1883, p. 183, and Whitman's, *ib.*, 1882, Dec., p. 50.—*Rep.*]

V. Idelson, M.D.

2801. *Mazzini on Laparotomy for Intestinal Occlusion.*—The patient was admitted with the certificate of typhlitis and consecutive intestinal occlusion. The belly was tympanitic, the pulse filiform, respiration short and quick; there was incessant fæcal vomiting; the indications for operation were urgent, and this was done two hours after admission. The abdominal wall and peritoneum was incised; the intestines did not protrude, fat only appearing in the wound. On introducing the finger the intestine was reached, and some recent adhesions were easily broken down. Low down on the left side the finger penetrated a large cavity, from which issued dense phlegmonous pus, mixed with shreds of broken down fat. On introducing the whole hand, the intestines were found small and pushed up to the right. After the pus was evacuated, a warm weak solution of carbolic acid was used, and Lister's dressings were applied with a large drainage-tube. The patient remained aseptic; some fever occurred, intermittent in type, and which yielded to sulphate of quinine. On the tenth day the patient was able to go out. The success of the operation was thus complete. The case is further remarkable for the asepsis maintained after the evacuation of an abscess in the peritoneal cavity.

G. D'Arcy Adams, M.D.

2802. *Weibel on the Arrest of Primary Hæmorrhage after Amputation.*—Dr. E. Weibel, in the course of a statistical report of the amputations performed in the Tübingen surgical clinic from 1877 to 1882 (*Mittheilungen aus der Chirurgischen Klinik zu Tübingen*, 1883), alludes to the well-known fact that, after a limb has been rendered bloodless by Esmarch's method, the primary hæmorrhage from the smaller vessels and from the capillaries is likely to be very profuse. The muscular structures of the arteries, the contraction of which would otherwise excite considerable constriction of the divided vessels and speedy closure of the smaller branches, seems to be temporarily paralysed by the compression of the limb and its prolonged deprivation of

blood. Hence, as a rule, the necessity of tying many more arteries after elastic compression than after isolated compression of the main trunk during amputation. With the object of showing the number of vessels that are ligatured in amputations with elastic compression of the limb, Dr. Weibel has added to his tables two returns giving the number of ligatures applied before and after the removal of the elastic band. These tables show in the first place that the number of vessels to be secured varies extremely even in the same parts of a limb. Thus, in amputations through the fore-arm the smallest number of vessels to be secured was 9, and the largest number 25; in the arm the numbers vary between 15 and 30, in the leg between 7 and 68, and in the thigh between 17 and 67. The average numbers of ligatures applied in the major amputations were as follows: in amputation of the thigh (46 cases) 38·1; in amputation of the leg (65 cases) 24·3; in amputation of the arm (6 cases) 22·5; in amputation of the fore-arm (7 cases) 15·7. The following are the average numbers of ligatures applied before and after the removal of the constricting band; amputation of the thigh (39 cases) 25·1 before, 14·9 after removal; amputation of the leg (49 cases) 15·3 before, 8·1 after removal. The number of ligatures it is found necessary to apply increases, as a rule, together with the thickness of the segment of the limb at which the amputation is performed. Thus, in amputation through the lower third of the leg (47 cases) an average number of 20·9 was needed; in the middle and upper thirds (18 cases) the average number was 33·2; in the lower third of the thigh (27 cases) 37·3; in the middle and upper thirds of the thigh (19 cases) 39·3. Dr. Weibel recommends, as the best means of arresting the free parenchymatous hæmorrhage that follows the removal of Esmarch's constricting ligature, elevation of the stump and compression of the flaps by a large sponge previously cleansed by a carbolic acid solution. The application, with the same object in view, of compresses saturated with oil of turpentine, has also been followed by very good results.

2803. *Bruns on the Prognosis of Spiral Fractures of the Long Bones.*—According to Professor Bruns, of Tübingen, quoted by Dr. Richter, of Breslau (*Centralblatt für Chirurgie*, No. 17, 1884), a torsion or spiral fracture, such as may be caused by forcible twisting of the shaft of a bone in its long axis, is composed in most cases of a spiral line of fracture and also of a straight line of fracture running parallel to the long axis of the bone. In forcible torsion of the bone the spiral line is first formed, and then the shaft is split by a vertical fracture which joins the two extremities of the spiral fracture. Varieties may, however, occur in the direction of the second line. In some cases there are two vertical lines of fracture, cutting out a loose rhomboidal fragment from the shaft. The characteristics of these injuries, besides the not unfrequent manifestation of the spiral lines of fracture, and of the well-marked projection under the skin of the sharp and pointed ends of the fragments, are very distinct crepitus, free abnormal mobility, much shortening of the limb, and of very considerable subcutaneous extravasation of blood. The prognosis of such fractures, even when they are simple, and the injury remains a subcutaneous one, is relatively very unfavourable. From the extremities of the main lines of fracture often proceed far-reaching fissures, which may extend into one or other of the articular extremities of the bone; the shaft is thus broken up into a number of fragments, and there is much injury done to the marrow. These conditions account for not only the frequent occurrence of pyæmia and septicæmia after compound spiral fracture, but also for the risk of gangrene after much injury, even when simple and subcutaneous, and the consequent loss of limb and, it may be, of life. Of four cases of simple spiral fracture reported, three terminated fatally, and in the fourth the patient was saved by primary amputation through the thigh.

2804. *Weir on Traumatic Aneurism of the Vertebral Artery.*—Dr. Robert F. Weir, of New York, reports in the *Archives of Medicine*, April 1884, the case of a man, aged 28, who on Dec. 8, 1883, was stabbed in the right side of the neck. The wound was situated about three-quarters of an inch below the lobe of the right ear, and just anterior to the sterno-mastoid muscle, and below it and extending downwards for several inches was a soft ovoid non-pulsating tumour. There was no bleeding at the time when the patient was first seen by a surgeon. The man stated that he had bled very freely, but he was not very pallid, nor were his clothes much stained with blood. On Dec. 10, when the tumour had almost entirely subsided, and the wound was nearly quite healed, the patient suddenly experienced almost complete paralysis of sensation and motion of the left upper extremity. On Dec. 15, when the paralysis was slowly disappearing, at a point two inches below and one inch posterior to the lobe of the right ear a faint pulsation was discovered, and on auscultation a slight bruit could be heard. Subsequently, all the signs of an aneurism, including pulsation, thrill, tumour, and bruit, were developed, and on Jan. 1, 1884, these became very pronounced. On Jan. 3, digital pressure was applied to the common carotid over the tubercle of the sixth cervical vertebra, and was continued for seven hours. After two hours, there was great diminution in the force of the pulsation. After three hours the pulsation could not be felt, and all signs of the aneurism, save the resistance due to the tumour on palpation, had disappeared. No cerebral symptoms were noticed during the treatment. The patient was regarded as cured on Jan. 12.

This, Dr. Weir states, is the only case of aneurism of the vertebral artery that has been successfully treated by compression. Nine other cases of vertebral aneurism have been recorded, in two only of which did recovery result. In one of these, mentioned by Mr. Holmes in his lectures on the 'Surgical Treatment of Aneurism,' the external carotid was exposed for ligation, but, on applying pressure to the denuded artery, no effect was produced on the aneurism, and the operation was abandoned after the patient had refused to submit to the laying open of the tumour. Ultimately the aneurism ceased to beat under the application of cold, and disappeared. Kocher has recorded a case under his own care, of vertebral aneurism from a stab made in a man, forty-two years old, between the fifth and sixth cervical vertebræ. Three weeks after the reception of the wound, during which time several hæmorrhages occurred with the formation of a pulsating tumour, Kocher enlarged the wound and removed the laminated clots, &c. He was able to seize the bleeding point with a long forceps, but could not apply a ligature to it. He then introduced a little pledget of lint dipped in perchloride of iron, and thrust it into the space between the transverse

processes of the vertebræ, securing it by graduated compresses of carbolised gauze. This patient recovered. It is pointed out by Dr. Weir that the principal difficulty in the cases of hæmorrhage or aneurism in this locality is to determine whether the carotid or its branches, or the vertebral artery, is wounded. This point is to be arrived at, it is asserted, by carefully considering the effect of pressure on the carotid, not only above but also on a level with the transverse process of the sixth cervical vertebra, or rather over the anterior or so-called carotid tubercle. Compression above this point affects, as a rule, the carotid artery only; over and below the transverse process compression will not only occlude the carotid but also the vertebral artery which runs to the outer side. To meet the possibility of the vertebral vessel entering the foramina at a higher point than usual, it has been suggested to isolate the carotid by Rouge's plan, and to grasp the relaxed sterno-mastoid with the finger and thumb and to pinch the carotid between them. A traumatic aneurism, whose pulsations remain unaffected by such compression of the carotid, will be found to concern the vertebral artery. Dr. Weir would treat such aneurism first by ice and compression by bandages, or by the fingers, failing which he would open the sac, introduce his finger to close the arterial opening until the clots are cleared away by the enlargement of the wound, and then firmly plug the wound with some antiseptic dressing.

2805. *Warren on the Healing of Arteries after Ligature.*—Dr. J. Collins Warren has recently published, in the form of a pamphlet, a provisional report on healing of arteries after ligature, which was first presented at a meeting of the Boston Society of Medical Sciences, held in March 1883. This report embodies the results of several years of experimental investigations on animals and examination of specimens taken from the human subject. The object of the author in these investigations has been to study the various pathological changes which occur in and around a ligatured vessel from the time the ligature has been applied, until the process of cicatrisation has fully completed itself. In a brief concluding summary, the author states that 'the ligatured artery is invested by a protective layer of new tissue formed from the peri-adventitial tissue, which, if well developed, gives great security against hæmorrhage until the permanent cicatrix has grown sufficiently strong. This may be likened to the provisional callus of bone. There is also an internal growth or callus formed from several sources, namely, the intima to a slight extent, the media more largely, also from cells finding their way from the peri-adventitia at a late stage through the retracted ends of the vessel. The thrombus is a more passive structure, takes no part in the growth, but is protective, and affords an excellent medium for the new tissue to germinate in. When the provisional part of the internal callus has disappeared we find remaining a cicatrix closely resembling the three coats of the artery, and affording by virtue of its peculiar structure an equally effective resistance to the pressure of the blood column. The ligament which unites the two ends of the vessel represents in part the residue of the external callus, but also a portion of the walls of the vessel which have been absorbed during the inflammatory process. A vessel successfully ligatured in its continuity cannot therefore be said to have been ulcerated into two separate portions, but must be conceived of as a hollow tube, which has solidified into a solid columnar mass of tissue, a considerable portion of which subsequently shrinks into a cord.

W. Johnson Smith.

2806. *Robin and Mollière on the Treatment of Genu Valgum by Osteoclasis.*—MM. Robin and Mollière presented to the Surgical Society of Paris, on January 6th fifteen patients on whom they had operated in the Lyons hospitals for different forms of genu valgum. The operations were effected by means of an apparatus, invented by M. Robin, which breaks the femur or tibia with great precision in always precisely the same spot, without the slightest injury to the neighbouring articulation, and without too violent pressure on the nerves and vessels. The apparatus has been frequently used in osteoclasis, and also experimented with on the dead body. It can exercise a considerable power. M. Robin asserts that, in fraction of the femur where there is faulty union, it can exercise a power equal to 1,500 kilogrammes. In genu valgum, especially, the femur can be broken two finger-breadths above the knee-joint, and the joint is not in the slightest degree affected. After the fracture is produced, an interval of three days should elapse before the limb is straightened. This, according to MM. Robin and Mollière, is the only means of preventing overstretching of the ligaments of the knee and consecutive hydrarthrosis. In twenty-eight operations there was an absence of either general or local reaction. The fracture thus produced is subperiosteal, and is generally united in thirty days.

2807. *Surgical Treatment of Scrofulous Adenitis of the Neck.*—An interesting discussion was carried on at the Société de Chirurgie in February last, on the surgical treatment of cervical adenitis. It is to be regretted that the discussion was too discursive, and not limited to one particular form of scrofulous or tuberculous adenitis. Some time ago, when medical treatment produced no result on cheesy gland-masses of the cervical region, surgeons attempted excision. The antiseptic method renders this operation almost free from danger, and it has been frequently effected with success. One of the most important considerations which induced surgeons to remove all the affected glands is the probability, which often becomes a certainty, of tuberculosis being propagated by these cheesy glands to other organs. It has been proposed to treat glands when neither suppurating nor softened in the centre, like cold abscesses or certain primary fungoid caries of bone-tissue, and remove by means of a sharp scoop all the fungoid and softened parts. Thus the dense and vascular fibrous capsule, which bounds the tuberculous or cheesy area, and a fibrous tissue which rapidly cicatrises is all that remains. This operation, popular in other countries, is, except by M. Trélat, not regarded with much favour in France. This surgeon strongly recommends it, but always on the condition that all the affected tissue should be scraped away. All other methods of treatment, such as interstitial injections of irritating fluids, tincture of iodine, &c., have been proved to be useless.

2808. *Verneuil on the Treatment of Abscesses from Congestion, or Ossifluent Abscesses.*—M. Verneuil (*Semaine Médicale*, Fevrier, 1884), has treated abscesses from congestion or ossifluent abscesses, by a new method, which has been followed by very good results. The sac of the abscess is emptied by means of an aspirator. A solu-

tion of 100 grammes of sulphuric ether, and 5 grammes of iodoform is then injected into it until the cavity is full. If, after a few days, abnormal fluid reappears in the sac, the operation is repeated. M. Verneuil has never injected more than twenty grammes of the solution. A larger dose produces toxic symptoms. A certain proportion of ether passes into vapour, and the sac becomes inflated, but this subsides very quickly from absorption. After each injection less and less pus appears in the sac. The general condition also improves. After emptying the sac, many surgeons, among others Dr. Lannelongue, have recommended scraping the walls and cauterising with a solution of carbolic acid.

2809. *Juillard on Antiseptic Incision in Hydrocele.*—M. Juillard (*Revue de Chirurgie*, Fevrier 10, 1884) tries to demonstrate the superiority of an antiseptic incision, such as proposed by Volkman, to injection of iodine. According to M. Juillard, the iodide injection, like all other methods of irritating the tunica vaginalis, is a simpler operation, but is followed by violent reaction. The cure is very slow, and there is generally a return of the disease. On the contrary, an incision carefully made, with every antiseptic precaution, never provokes inflammation due to reaction; it is not more painful than an injection and cures as quickly, without relapse. The principal objection to this mode of treating hydrocele, is that it is long and requires great care and dexterity. M. Juillard's preference for treatment by incision is supported by fifty-four operations; he modified, in some respects, the primary method of Volkmann. He maintains that anæsthesia is not necessary; there is pain only when the skin is incised, and that is done rapidly. Large incisions are preferable to small. An interesting detail in the operation, according to M. Juillard's modifications, is the resection of a certain portion of the tunica vaginalis, in such a way that suture of the edges of this membrane does not prevent the principal fold from being applied immediately against the testicular fold. M. Juillard considers this particular most important, the essential condition to attain obliteration of the tunica vaginalis by union of the serous walls; which prevents the return of the hydrocele. This suture, made with very fine catgut, is covered by the walls of the scrotum, also sutured. Volkmann places a drainage-tube in the tunica vaginalis; M. Juillard in the scrotal wall, and only for a short time. An antiseptic dressing is then applied. M. Juillard lays great stress on the application of sponges to the scrotum; they act as absorbent compresses.

W. VIGNAL.

2810. *Biondi on Extirpation of the Lungs.*—The results of numerous experiments made by the author on sheep, dogs, and cats are reported in the *Correio Medico de Lisboa*. Partial extirpations, and amongst others that of both apices, were all followed by cure; total extirpation of one lung was successful in more than 50 per cent. of the cases, and several deaths seem to have been due more to some imperfection in the antiseptic dressing than to the operation itself.

2811. *Mollière on the Treatment of Stricture of the Urethra by Extirpation of Indurated Tissues.*—This mode of treatment, which is described in the *Lyon Médical*, No. 21, 1884, has given very good results in some serious cases of traumatic stricture. Dr. Mollière makes an incision in the perinæum, and removes all the diseased portions of the urethral and peri-urethral tissues; he then unites, by means of wire, the two ends of the urethra over a catheter passed into the bladder; the mucous membrane must not be transfixed by the needle. The perinæal excision is closed by superficial stitches, between which small drainage-tubes must be placed. The chief advantages of this method are, according to Mollière, first, the favourable definitive results, then the ease with which the catheter can be withdrawn, and reintroduced after the operation.

2812. *Richet on the Treatment of Loose Cartilages in the Knee-Joint.*—When the severity of the symptoms is not such as to make the extraction of the loose cartilage necessary, Professor Richet recommends (*Revue de Thérap.*, No. 10, 1884) the use of a metallic ring, measuring 3 centim. in diameter, and provided on one surface with four short points. The ring is pressed against the skin covering the loose cartilage, which is transfixed by the points. The limb is then kept quiet on a splint for about five days, after which the loose cartilage is found to have become adherent to the synovial membrane. J. S. KAESER, M.D.

2813. *Israel on Paralysis of the Radial Nerve Cured by Operation.* — At the Berlin Medical Society on March 26 (*Deutsche Med. Wochensch.*, April 3), Dr. James Israel showed a case of radial paralysis cured by operation. The patient was a lad aged 17, who had got his arm broken in three places by a machine accident. The paralysis was noticed at once, and was found to be still present after the cure of the fracture. All the muscles supplied by the radial nerve were paralysed, as well as the triceps, and the muscles were considerably atrophied. Irritability to the induced current was lost, but contractions occurred at the closing of both cathode and anode with the constant current. Sensibility was diminished, but not entirely lost. The nerve was then laid bare between the external head of the triceps and the supinator longus, and was followed upwards to the seat of fracture, where it was found to be flattened and compressed at an angle by the edge of the lower fragment of the humerus, and firmly fixed in a mass of connective tissue. It was freed from its surroundings, and the edge of the bone was chiselled off, so that the nerve could take its normal course; iodoform dressing secured healing by first intention. The patient was now handed over to electric treatment, the nerve acting no better than it did before, and in less than a month the supinator longus began to act. Movement in other muscles followed in due course, and in two months the muscles were all reacting to the constant current.

2814. *Von Hacker on Excision of the Pancreas.*—At the meeting of the Royal and Imperial Society of Physicians in Vienna on March 28 (*Wien. Med. Wochensch.*, April 3), Dr. Von Hacker showed a patient from whom Prof. Billroth had removed the pancreas on account of carcinoma. The chief symptom was vomiting, which came on at last from one to two hours after each meal, and gave the patient so much trouble that she begged to have the operation performed. It was borne very well. Milk and bouillon could be taken during the first days after it, and in a week she could eat the lighter forms of meat. She was now quite well, a month after operation, and had gained 42 lbs. in weight during her stay in hospital.

2815. *Von Hacker on Removal of the Spleen.*—Dr. Von Hacker also showed a splenic tumour which had been removed by Prof. Billroth from a woman, aged 43. It had caused her pain when she

lay on her left side for ten years, having grown slowly at first, but much more rapidly during the last two years, more especially in the last three months. On opening the abdomen, the tumour came fully into view, with no adhesions on its outer surface, although its concavity was not so free. The intestines were adherent in many places, and a portion of the tail of the pancreas had to be removed along with the tumour. The portion removed measured 71 centimètres (28 inches) in circumference, and was 28 centimètres (11 inches) in length, and 18 centimètres (7 inches) in breadth. The operation took place four weeks before the meeting, and in that time the patient had progressed steadily towards recovery, so that there was every hope that she would go on well.

Alice Ker, M.D.

MEDICINE.

RECENT PAPERS.

2816. Duffey.—The Connection of Acute Diabetes with Pancreatic Disease. (*Brit. Med. Jour.*, March, p. 608.)

2817. Smart.—Scurvy in its Bearing on Explorations by Sea. (*Brit. Med. Jour.*, May, pp. 943 and 991.)

2818. Wilson.—Bleeding from the Trachea Simulating Pulmonary Hæmorrhage. (*Ibid.*, May, p. 992.)

2819. Rake.—A Fatal Case of Earth-Eating. (*Ibid.*, May, p. 994.)

2820. Sanctuary.—The Diagnostic Value of Sputum. (*Ibid.*, May, p. 948.)

2821. Mackenzie.—Hay Fever. (*Ibid.*, May, p. 939.)

2822. Jones.—The Treatment of Sciatica. (*Medical Times and Gazette*, May, p. 585.)

2823. Richardson.—A Case of Aneurism of the Cœliac Axis. (*Asclepiad*, April, p. 97.)

2824. Beaumont.—Three Cases of Pleural Effusion. (*Brit. Med. Jour.*, April, p. 663.)

2825. Booth.—A Rare Case of Pulmonary Abscess. (*Practitioner*, April, p. 269.)

2826. Barlow.—A Case of Purpura occurring in the Course of Typhoid Fever. (*Lancet*, April, p. 745.)

2827. Mollière.—The Temperature of the Body in Chlorosis. (*Lyon Méd.*, No. 21, 1884.)

2828. Leyden. — Idiopathic Peritonitis. (*Deutsche Med. Wochensch.*, April 24.)

2829. Scalese and Ammandola.—On the Neuralgiæ in Pulmonary Tuberculosis. (*Riv. Clin. e Terap.*, Oct. 1883; *Gazz. Med. Ital. Prov. Venete*, May 17, 1884.)

2830. Marianini.—Pectoral and Vocal Fremitus. (*Riv. Clin. Terap.*, March 1884.)

2831. Testi, A.—A Rare Case of Abscess of the Stomach. (*Annali Univ. di Medicina*, December 1883.)

2832. Lapponi.—On Mild Forms of Typhoid Fever: a Clinical Study. (Reprinted from the *Archiv. Med. Ital.*, April and May, 1883.)

2833. Prophylactic Inoculation against Yellow Fever. (*Jour. do Comercio Rio de Janeiro.*)

Art. 2816. *Duffey on the Connection of Acute Diabetes with Pancreatic Disease.*—Dr. Duffey, in a paper read before the Academy of Medicine in Ireland (*Brit. Med. Jour.*, March 1884, p. 608), reports a case of diabetes occurring in a farm-labourer, aged 24, the duration of which was two months. There was a sudden onset of abdominal pain, vomiting, and diarrhœa, a week before death, which was preceded by coma. At the *post mortem* examination nothing remarkable was seen, with the exception of the condition of the pancreas. This gland was hypertrophied, and felt extremely hard and indurated; on microscopic examination, this was proved to be due to carcinomatous infiltration.—[A very interesting paper on 'Pancreatic Diabetes' is recorded in the London Medical Record, 1881, p. 150. Vide *Medical Digest*, sect. 336 : 1.—*Rep.*]

2817. *Smart on Scurvy in its Bearing on Explorations by Sea.*—In the *Brit. Med. Jour.*, May 1884, pp. 943 and 991, a paper on scurvy by Sir Wm. Smart is abstracted. The author gives the history of Arctic explorations for the last one hundred years, and concludes by saying that the evidence brought together tends to show that, in the Arctic regions, the compulsory enjoyment by castaways of dry fresh air, with the necessity to obtain fresh animal food from indigenous animals, is more conducive to health, and the avoidance of scurvy, than life in ships, where men dwell in a warm, moist, and vitiated atmosphere, and are fed on the best of ships' diet, with lime-juice as an antiscorbutic, but without the advantage of much fresh animal food, which is second only to fresh vegetables in the prevention of scurvy. To this extent, Sir Wm. Smart concurs in the recommendations offered by Dr. W. H. Neale, surgeon to the *Eira* expeditions, 1880–1882. (Vide *Brit. Med. Jour.*, March 3, 1883, pp. 410 and 428; and *Lancet*, March 3, 1883, p. 363.)

2818. *Wilson on a Case of Bleeding from the Trachea simulating Pulmonary Hæmorrhage.*—Dr. E. T. Wilson, in the *Brit. Med. Jour.*, May 1884, p. 992, reports the case of a gentleman, aged 61, who was seized in the night with profuse hæmorrhage, which bore all the appearance of coming from the lungs, but, on careful laryngoscopic examination, its source was seen to be in an ulcerated surface, about half an inch from the bifurcation of the trachea. Other ulcerations, ragged and dirty in character, extended upwards, partly involving the arytenoid folds, and the surface of the epiglottis. A spray of sulphate of zinc, and carbolic acid with iodine in an antiseptic respirator, was persevered in for about four weeks. The hæmorrhage soon subsided, the ulcerated surfaces granulated over, and in six weeks' time only a white cicatrix remained.

2819. *Rake on a Fatal Case of Earth-Eating.*—Dr. B. Rake, in the *Brit. Med. Jour.*, May 1884, p. 994, records the case of a Hindu woman, aged 30, who was admitted into hospital on account of eating earth. She continued in her usual state for about twenty-four hours after admission, but the next morning, about 9 A.M., she fell rapidly into a state of collapse, pupils contracted, pulse feeble, extremities cold. There was no vomiting, nor had there been any. In a few hours, the patient died without any fresh symptoms arising. A *post mortem* examination revealed no symptoms of poisoning. Altogether there must have been a quarter of a pound of earth in the stomach and intestines. The author is at a loss to state the ultimate cause of death, but thinks it might have been simple exhaustion after prolonged dirt-eating and starvation, or it might have been reflex from pressure of the weight of earth in the stomach on the abdominal sympathetic, as in cases recorded of sudden death from an overloaded stomach. [Some interesting facts regarding earth-eaters may be gleaned from sect. 127 : 3 of the *Medical Digest.*]

2820. *Sanctuary on the Diagnostic Value of Sputum.*—Dr. Sanctuary, in the *Brit. Med. Jour.*, May 1884, p. 948, records a case illustrating the diagnostic value of sputum stained by Koch's method. The

patient, a girl, aged 16, was seen in consultation by Dr. Sanctuary ; physical examination revealed slight dulness over the upper border of the left scapula, and some crepitation in the same region, with a temperature varying from 100 to 102, which had persisted for some days. The girl was plump and apparently well nourished, slept well, and coughed very little. Some sputum was procured, which was prepared and stained according to Dr. Heneage Gibbes's method, when swarms of bacilli were at once apparent. Thereupon a most unfavourable prognosis was given, and the patient died of acute phthisis about eight weeks afterwards.

2821. *Mackenzie on Hay-Fever.*—In the *Brit. Med. Jour.*, May 1884, p. 939, a lecture on hay-fever by Dr. Morell Mackenzie is published. The disease is confined to a peculiar affection of the mucous membrane of the nose, eyes, and air-passages, giving rise to catarrh and asthma, almost invariably caused by the action of the pollen of grasses and flowers, and therefore prevalent only when they are in blossom. The predisposing cause of the complaint is the possession of a peculiar idiosyncrasy, but on what the idiosyncrasy depends is quite unknown. One of the most singular features of the disease is that it is almost exclusively confined to persons of some education, and generally to those of fair social position. Many more men suffer than women, and heredity has a powerful influence. The most important sources to which the origin of hay-fever has been attributed are, heat, light, dust, benzoic acid, coumarin, excess of ozone, and over-exertion, or several of these influences in combination. Dr. Mackenzie asserts that pollen is the universal cause, but does not deny that other irritating particles might produce a similar complaint. if persistently brought into contact with the mucous membrane. The symptoms of the disease are seen under two well-marked types, the catarrhal and the asthmatic. Treatment is by no means satisfactory. The first measure must be to remove the patient from the cause, and a sea-voyage is probably the most sure step to take. Amongst the drugs that prove most beneficial, the author has found valerianate of zinc, in combination with assafœtida, more valuable than any other. For the relief of the irritation of the eyes, a lotion containing two grains of acetate of lead, with two minims of dilute acetic acid, in an ounce of water, is most soothing.

2822. *Jones on the Treatment of Sciatica.*—Dr. Handfield Jones, in the *Med. Times and Gazette*, May 1884, p. 585, contributes notes on seven cases of sciatica. Case 1 occurred in a costermonger, aged 60, who had suffered for ten years, but had relief for a few months from stretching of the nerve. He was cured at length by the administration of quinine and hypophosphite of lime, with the application of blisters to the lower and outer part of the affected leg. Cases 2 and 3 were treated by a mixture of hypophosphite, with an occasional blister over the seat of acute pain, from which marked benefit was derived. Case 4 yielded to quinine and iron, with counter-irritation. Case 5 occurred in a woman, aged 40, who had borne fifteen children. She was treated by firing a spot about four inches inside the great trochanter, and two inches above the tuber ischii, together with tonics and blisters, which were followed by good results. Case 6 was soon cured by quinine and iron ; and Case 7 was of syphilitic origin, and kept shifting from one leg to the other ; this soon yielded to tonic treatment.

2823. *Richardson on a Case of Aneurism of the Cœliac Axis.*—In the *Asclepiad*, April 1884, p. 97, a clinical study is given of a gentleman, aged 54, who suffered from an aneurism of the cœliac axis. The previous history of the patient was good until seven years before he came under the author's care, when he sustained a severe accident in the hunting field, which caused fracture of three ribs of the left side. He dated his present symptoms from that accident. The most distressing symptom was a most acute pain always commencing in the abdomen, above the umbilicus, and extending in various directions. When the attacks came on they would last five or six hours, then suddenly go off, leaving the patient 'unhinged' in his mind, and often causing him to fall off to sleep for many hours. There was frequent nausea, often vomiting, and dread of food. The circulation presented the most remarkable irregularities. The pulse was 78, large, soft, easily compressible, and at times jerky. At the base of the heart there was an extremely loud rough murmur with the second sound, and towards the apex a faint but prolonged systolic murmur. The rough murmur at the base was extended along the aorta into the carotids, and through both subclavians into the brachials. In the lower part of the body the murmur, very loud and coarse, extended along the whole of the abdominal aorta in the front of the body into the iliacs, femorals, and popliteals. Immediately above the umbilicus there was a round pulsating tumour about the size of an orange, freely movable from side to side. The diagnosis made was aneurism of the cœliac axis. About five weeks after the patient was first seen by the author, there was a discharge of blood-clots from the bowel, with signs of a collapse ; this continued for five days, until the patient gradually sank. On *post mortem* examination, there was found a large aneurismal pouch of the cœliac axis, attached to the intestine, which, when laid open, was found to communicate with the tumour, the handle of the scalpel easily passing from the intestine into the aneurismal pouch. The tumour weighed nine ounces.

2824. *Beaumont on Three Cases of Pleural Effusion.*—Mr. W. M. Beaumont, in the *Brit. Med. Jour.*, April 1884, p. 663, reports three cases of pleural effusion, in each of which the patient was unaware that there was anything seriously wrong with the chest. One was a nervous, hysterical woman, aged 42, who complained of pains in the abdomen and epigastrium, with malaise, but her symptoms were not severe enough to confine her to bed. On examining the chest, there were the usual signs of fluid in the left side ; the patient consented, after some trouble, to allow the side to be aspirated, and thirty-four ounces of clear blood-coloured serum were drawn off. The second case was that of a boy, aged 12, who had never been robust, but was not prevented from working as an errand-boy. He complained of occasional pains in the left side, which had been felt during the last twelve months. On aspirating the left side, twenty ounces of clear straw-coloured serum were evacuated. The third case occurred in a labourer, aged 24, who suffered from a troublesome cough. He complained also of tenderness over the spinous processes of the second, third, and fourth dorsal vertebræ. The tongue was clean and moist, the appetite good, and the urine normal. There was slight dulness at the left base posteriorly. In a few days rapid effusion into the left pleura occurred, with no subjective symptoms.

Temperature 98°·4. Respirations 28. Pulse 76. Forty-eight ounces of yellow alkaline serum were drawn off by the aspirator.

2825. *Booth on a Case of Pulmonary Abscess.*—Mr. Mackenzie Booth, in the *Practitioner*, April 1884, p. 269, records a case of acute pulmonary abscess in a girl aged 13. The patient had a strongly marked family history of phthisis, and had repeatedly suffered from attacks of bronchitis. About three weeks before Mr. Booth saw her, she had again contracted bronchitis, from which she was convalescent; but the cough returned, with exacerbations of fever and sweating. The temperature was 102°·5, the breathing short and hurried. In the right supraspinous fossa there was slight dulness, with crepitant râles over the right pulmonary apex before and behind. For about eight days the symptoms grew worse; the dulness increased over the greater part of the right upper lobe. The temperature was 104°, and the pulse could not be counted. On the eighth day a severe fit of coughing set in, during which a quantity of yellow pus was expectorated; this continued for some hours, producing a marked improvement on the patient. The fever, respirations, and pulse-rate fell considerably. The expectoration lasted some days, and dulness gave way to amphoric resonance. At the end of a fortnight, the cough and expectoration had nearly gone, the breath-sounds gradually became broncho-vesicular, and dulness had well-nigh disappeared; in the course of two months the patient was enjoying better health than she had ever known before. The supervention of acute pulmonary abscess, in a patient debilitated, and with a disposition to phthisis, is rare; the extension of a bronchial catarrh to the pulmonary apex, and its localisation there, generally lead to chronic changes in the pulmonary tissue, and not to the rapid process of acute abscess-formation.

2826. *Barlow on a Case of Purpura occurring in the Course of Typhoid Fever.*—Dr. Thomas Barlow, in the *Lancet*, April 1884, p. 745, reports a case of typhoid fever presenting purpuric symptoms. The patient, a saleswoman, aged 26, was admitted into hospital on the eleventh day of the disease. About four days after admission some dark clots of blood were passed with the stools, and blood-stained mucus was frequently expectorated. Three small ecchymoses were detected in the mouth, and, as there was no abdominal tenderness, and very little tympanites, the bleeding from the bowel was suggested to proceed from inflamed Peyer's patches rather than from an ulcerated vessel. The next day a few more ecchymoses were seen in the mouth, and blood appeared to be oozing continually, although there was no sponginess. The urine also became smoky, and there were many purpuric spots on the arms, with deep and more extensive bruise-like patches on the thighs, legs, &c. The temperature varied most days from 97°·6 to 103°·5. Five-minim doses of turpentine were given every six hours on loaf-sugar, but produced little good, and the ammoniated extract of ergot in twenty-drop doses every five hours was substituted for it, with better results, the patient gradually improving; but on the twenty-eighth day typical pea-soup typhoid stools were passed, which became numerous, and rapidly reduced the patient to an extreme state of prostration, so that she gradually became unconscious, and died thirty-two days after admission, being the forty-second day of the disease. *Post mortem* examination failed to detect any open vessel, but showed that the primary attack had mainly affected the small intestine, whilst the relapse had chiefly affected the large bowel. The author remarks that, when purpura occurs in typhoid fever, it is not necessarily a sign of malignancy; it is rare, but several cases have been known to recover. Richard Neale, M.D.

2827. *Mollière on the Temperature of the Body in Chlorosis.*—The careful mensuration of the rectal temperature of thirty chlorotic patients has convinced the author (*Lyon Médical*, No. 21, 1884) that this disease deserves the name of febris alba virginum, by which it was known to the ancients. The temperature was found to oscillate between 37°·8 and 38°·8 C.; but in some cases it rose to 39° or 40° without apparent cause. The temperature became normal after the disease had been cured. Dr. Mollière thinks that the elevation of temperature might be explained by some peculiar action of the nervous system. There was no evidence of excessive oxidation, or of rapid destruction of the red corpuscles; the urine of his patients was found in normal quantity; in contained no albumen, and its colour was very light. J. S. Kaeser, M.D.

2828. *Leyden on Idiopathic Peritonitis.*— The *Deutsche Med. Wochensch.* of April 24 contains the substance of a lecture by Dr. E. Leyden on idiopathic peritonitis. After giving a summary of the way in which the idiopathic nature of some cases was first discovered, where no cause for the inflammation could be made out after death, three cases are cited, two of which ended fatally, while the third recovered. Both the fatal cases were considered to be rheumatic in origin, and to be the result of cold; in one of them, the illness had begun during menstruation. The exudation in the second case was examined microscopically, and was found to contain a number of micrococci, chiefly in chains or in groups of two or three, which are illustrated by means of a coloured plate. The fatal cases lasted for five and eight days respectively; the other was discharged from hospital within the month. The article concludes by recommending operative procedure as in the case of pleuritic effusion, but the author recognises fully the difficulty of diagnosing sufficiently early to make operation advisable. Alice Ker, M.D.

2829. *Scalese and Ammandola on Neuralgiæ in Pulmonary Tuberculosis.*—One of the most frequent and most troublesome symptoms in the course of pulmonary tuberculosis is the appearance of pain in some part of the chest or neighbouring parts (*Riv. Clin. e Terap.*, Dec. 1883; *Gazz. Med. Ital. Prov. Venete*, May 17, 1884). Its pathogenic interpretation is various. It may be occasionally due to the inflammatory process propagated from the lung. In other cases it must be referred to reflex neuralgiæ, such as are noticed at the commencement of inflammation of the lungs, or to neuralgiæ due to dilatation of the venous trunks, in the affections of the internal organs. The symptom of pain, may moreover, in the acute form, and especially in the most acute or suffocative form, have a value in the diagnosis between this disease and typhus; and in certain cases, when it affects the base of the chest, it may lead to the suspicion of diaphragmatic pleurisy, but the physical signs and functional disorders of the lung point to a true diagnosis. Great importance as a sign of incipient tuberculosis is attributed to pain on pressure in different points of the chest, and especially in one or the other supraspinous regions. Other forms of neuralgia referable to the phthisical process are: (*a*) facial neuralgia, which Perroud

considers as the result of a reflex action, which is transmitted from the pneumogastric by means of the bulb to the trigeminus; (*b*) supraclavicular neuralgia, radiating to the neck and upper extremities, which Bourdon explains by the anastomoses of the first intercostal nerves with the brachial and cervical plexus, and Bergson by the intimate relation of these two nerves and the phrenic; (*c*) neuralgia of the ear without any anatomical alteration; (*d*) cervico-occipital neuralgia (much more rare), pains in the shoulder and upper extremities, due to repetition of the morbid process at the base of the encephalon or spinal cord. These various forms of neuralgia were formerly treated by revulsives and sedatives; the first, however, are generally useless, and the second, having to be used in large doses, are harmful. Dr. de Renzi has used in many cases of symptomatic neuralgia in phthisis the galvanic current (6–10, and in obstinate cases even more elements, Spamer's apparatus) for five to ten minutes, and has obtained the best results, the neuralgia disappearing for good in from two to five days.

2830. *Marianini on Pectoral and Vocal Fremitus.*—Professor Galvagni and the author (*Riv. Clin. Terap.*, March 1884) have already noted that, in some cases in which the pectoral or vocal fremitus has a diagnostic value, the fremitus does not follow the ordinary rules. Marianini reports five cases in which he found this to be the case, observed in the last year; three of pneumonia, one of tuberculosis with cavities, and one of pleurisy. In the three cases of pneumonia, the fremitus was diminished; and this diminution cannot be explained by the theory of Hoppe, that, in pneumonia affecting the whole lung, the fremitus is prevented by the distension of the thoracic wall by the increased volume of the inflamed lung, since in these cases there was not extensive hepatisation. He supposes that in some cases the large bronchus in the focus of the hepatisation is compressed, so that the contained air gives rise to feeble vibrations only, which are not strong enough to cause the thoracic wall to vibrate. In some cases, he imagines that the diminution of the fremitus depends on the special nature of the pneumonic exudation, which renders the pulmonary tissue less elastic and less compact. In other cases of pneumonia, the fremitus may be diminished by the incomplete or absent hepatisation of that superficial layer of lung which lies between the pneumonic focus and the thoracic wall. Another fact worthy of notice is the co-existence of bronchophony with the diminished pectoral fremitus, the fremitus thus not, as might be anticipated, running parallel with the resonance of the voice. This may be compared with Baccelli's sign, in which there is diminution or disappearance of fremitus, with increase of the perception of the aphonic voice. If the air in the compressed bronchus give rise to feeble vibrations only, these cannot cause the thoracic wall to vibrate, but they are transmitted by the condensed pulmonary tissue, and so give rise to bronchophony. In the case of tuberculosis with cavities, he found on first examination the pectoral fremitus increased; some days later, its intensity was decidedly diminished. Here it is admissible to suppose a physical change in the contents and walls of the cavities, modifying the conditions of transmission of the vibrations. The fifth case was one of pleurisy, in which the pectoral fremitus over the affected part was of the same intensity as on the sound side. It may be even increased on the affected side, and the author agrees with Madame E. Bourchier, that this may be due to pleuritic adhesions fixing the pulmonary tissue to the thoracic wall; in other cases it may be explained by the distension of the thorax by the abundant effusion, but this explanation, being contrary to the theory of Hoppe, the author rejects. His conclusions shortly are the following. 1. In some cases of pneumonia, instead of increase of the pectoral fremitus there is diminution. 2. The interpretation of this is not that given by Hoppe. 3. With bronchophony in pneumonia there may be diminished pectoral fremitus. 4. In cases of pulmonary cavities, there may be at different times in the same individual a different result with regard to the pectoral fremitus, owing to modifications which may take place in the contents and walls of the cavities. 5. In pleurisy, contrary to what is ordinarily held, the pectoral fremitus may not only remain the same as on the sound side, but may even be reduced.

2831. *Testi on a Rare Case of Abscess of the Stomach.*—A man, aged 45, had always suffered from dyspepsia from over-eating and drinking (*Annali Universali di Medicina*, December 1883). Symptoms of chronic gastritis, hæmatemesis, increase of volume of the stomach lasted a long while. No tumour could be found. The temperature was always subnormal. At the necropsy, extensive adhesion of the stomach to the neighbouring viscera was found with general and intense hypertrophy of its walls, and great dilatation, the capacity being 4,000 cubic centimètres. The pyloric orifice was not narrowed. There were epithelial abrasions but no signs of ulcer. On the posterior wall near the pylorus, an oval fluctuating swelling was noticed, 13 centimètres long by 8 broad; on opening this, 300 cubic centimètres of pus escaped. The abscess was situated in the submucous cellular tissue, between the mucous and muscular coat. No other alteration worthy of notice was found in the other viscera. Dr. Testi's paper, which is a very long one, enters fully into the history of this rare disease, and is completed by a bibliographical list of authorities.

2832. *Lapponi on the Mild Forms of Typhoid Fever.*—This is a very interesting and well-written clinical study of the slighter forms of typhoid fever, which the author classifies thus: forms slight by their duration, forms slight by their intensity, and a third class slight by duration and intensity. Of forms slight as to their duration, constant symptoms are: splenic tumefaction, bronchial catarrh, and fever. The course of this last characterises the different varieties; the temperature either, as in ordinary attacks of typhoid fever, has three well-marked stages (period of ascending oscillations, stationary period, and period of decline), or is limited to one or two of these stages only. In some rare cases, the fever assumes the course of a quotidian intermittent without repeated rigors or sweats. Of the forms slight by intensity, the duration may be long. These either approach the classical type, or are irregular when the fever is 'subcontinuous' or intermittent, or is partly continued, partly intermittent. Splenic tumour is a constant symptom. These slight forms must be considered due either to a small dose of the poison or to its exhausted activity, or possibly to the mode by which it gained access to the organism, as well as to the conditions of receptivity or organic resistance of the patient. The anatomical alterations are identical with those of ordinary typhoid fever. There is no constant relation between their

extension and the intensity or gravity of the clinical form. The diagnosis is very important, especially as regards prophylaxis ; it is often very difficult. The splenic tumour, rash, pain in the ileo-cæcal fossa, evening headache, apathy of the patient, bronchial catarrh, often good appetite, notwithstanding the fever, pulse small, and very often dicrotic, are the chief elements of a good diagnosis. The prognosis in children is good ; in adults it is subordinated to the docility of the patients and to the possibility of complication ; in old people, it is always more doubtful. As to treatment, the author recommends calomel for the first three or four days, then mineral acids or benzoic acid. Except the general or partial cold bath, antipyretics, especially in cases of long duration, are harmful or useless.

2833. *Prophylactic Inoculation against Yellow Fever.*—From the *Jour. do Comercio* of Rio de Janeiro, we learn that the parasite of yellow fever, discovered by Dr. Freire, has been successfully cultivated after the method of Pasteur, and that experiments are now being made of its prophylactic inoculations against yellow fever. Two hundred and eleven inoculations are asserted to have been made with successful results.

G. D'Arcy Adams, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

2834. Green.—Unusual Symptoms following the Use of Unguentum Hydrargyri Ammoniati. (*Brit. Med. Jour.*, April, p. 153.)

2835. Garraway.—The Affinity of Chloroform for Strychnia. (*Brit. Med. Jour.*, May, p. 995.)

2836. Robertson.—Injection of Solution of Corrosive Sublimate in Prostatic Retention of Urine. (*Brit. Med. Jour.*, May, p. 949.)

2837. Lister.—Solution of Corrosive Sublimate. (*Brit. Med. Jour.*, May, p. 1018.)

2838. Ewart.—The Treatment of Dysentery by Ipecacuanha. (*Lancet*, May, pp. 794 and 838.)

2839. Hill.—Strathpeffer as a Health-Resort. (*Lancet*, May, p. 793.)

2840. Bennett.—The Effects of the Prolonged Administration of the Bromides in Epilepsy. (*Lancet*, May, pp. 883 and 928.)

2841. Thomson.—Evidence with Regard to Salicylate of Soda. (*Lancet*, May, p. 932.)

2842. Allen.—The Treatment of Hay-Fever. (*American Jour. Med. Science*, Jan.)

2843. Hurd.—Hyoscyamine in Insanity. (*American Jour. of Insanity.*)

2844. Bartholow.—The Treatment of Albuminuria by Nitro-Glycerine and Chloride of Gold and Sodium. (*Boston Med. and Surg. Jour.*, Jan. 10.)

2845. Burman.—Iodoform in Erysipelas. (*Practitioner*, May, p. 365.)

2846. Poore.—Choice of Electric Batteries. (*Med. Times and Gazette*, April, p. 549.)

2847. Richardson.—The Cold Bath Treatment of Enteric Fever. (*Asclepiad*, April, p. 183.)

2848. Richardson.—The Use of Ammoniated Chloroform. (*Ibid.*, p. 158.)

2849. Richardson.—Crushed Ice and Lard in the Treatment of Burns and Scalds. (*Asclepiad*, April, p. 164.)

2850. Richardson.—The Internal Administration of Amyl-Nitrite. (*Ibid.*, April, p. 165.)

2851. Richardson.—Administration of Alcohol previously to Chloroform or Methylene Bichloride. (*Asclepiad*, April, p. 159.)

2852. Hicks.—The Utility of Coca. (*New York Med. Jour.*, Feb. 23.)

2853. Crook.—The Properties of Kairin. (*Philad. Med. News*, March 22.)

2854. Wale.—Inunction of Quinine. (*Louisville Med. News*, March 29.)

2855. Mader.—A Modification of Leiter's Tubes. (*Wiener Med. Blätt.*, Feb. 21.)

2856. Chéron.—The Treatment of Metrorrhagia by Savin and Rue. (*Rev. de Thérap. Méd. et Chir.*, No. 10, 1884.)

2857. Liakhnitzky, Evgeny A.—A Contribution to the Study of Pharmacology of Cantharidin. (*St. Petersburg Inaugural Dissertation*, 1884, p. 118.)

2858. Maklakoff.—On Jequirity. (*Vratch*, No. 9, 1883, p. 140.)

2859. Kaczorowski.—On Subcutaneous Injections of Morphia in the Treatment of Inflammation. (*Przeglad Lekarski*, and *Vratch*, No. 5, 1883, p. 76.)

2860. Petersen, O. V.—On Subnitrate of Bismuth as a Dressing in Venereal and Cutaneous Diseases. (*Vratch*, 1884, No. 16, pp. 267–8.)

2861. Bogoluboff, N. F.—On the Treatment of Phagedænic Chancre by Pyrogallic Acid. (*Meditz. Pribavl. k' Morsk. Sborn.*, Dec. 1883, pp. 35–7.)

2862. Bogoluboff, N. F.—On the Treatment of Eczema and Itch by Liquid Styrax. (*Meditz. Pribavl. k' Morsk. Sborn.*, Dec. 1883, pp. 37–8.)

2863. Rosenblum.—On the Use of Trichlorphenol in Country Practice. (*Russkaia Meditzina*, 1884, No. 17, p. 391.)

2864. Grigorieff, A.—Burnt Alum as a Substitute for Quinine. (*Russkaia Meditzina*, 1884, No. 14, pp. 316–8.)

2865. Tzitovitch, Andrei.—A Contribution to the Study of the Action of Cold and Hot Chapman's Spinal Bags. (*St. Petersburg Inaugural Dissertation*, 1884, p. 74.)

2866. Tcherniavsky, Ivan.—A Contribution to the Study of Wet Packings. (*St. Petersburg Inaugural Dissertation*, 1884, p. 30.)

2867. Landsberg.—On the Changes of Morphia in the System. (*Vratch*, 1883, No. 7, pp. 107–8.)

2868. Kiseleff, M. K.—On the Treatment of Croupous Pneumonia. (*Vratch*, 1883, No. 7, pp. 104–5, and No. 8, pp. 116–7.)

2869. Kuprianoff.—On the Diuretic Action of Common Lovage Root. (*Vratch*, 1883, No. 18, p. 283.)

2870. Renon.—Application of the Antiseptic Method to the Treatment of Croup and Diphtheritic Angina. (*Gazz. di Med. Pubblica*, April, and *Gazz. Med. Ital. Prov. Venete*, May 10.)

2871. Queirolo, G. B.—Plethysmographic Researches on Fever and Kairin. (*Gazz. Med. Ital. Prov. Venete*, May 31, 1884.)

2872. Leblond, E.—Physiological and Therapeutical Action of Caffein. (*Gaz. Hebdom. de Méd. et de Chir.*, 1884.)

2873. Testa, Baldassare.—Iodoform in the Treatment of Gout. (*Gazz. Med. Ital. Prov. Venete*, May 31, 1884.)

Art. 2834. *Green on Unusual Symptoms following the Use of Unguentum Hydrargyri Ammoniati.*—Mr. W. E. Green, in the *Brit. Med. Jour.*, April 1884, p. 853, records a few notes on an unusual case of acute local dermatitis produced by unguentum hydrargyri ammoniati. The patient, a lady, applied some ointment to the scalp on account of its being scurfy ; soon after the application, there was a considerable redness and swelling about the left temple, forehead, ear, and scalp. There was no

feeling of heat, no itching or pricking sensations. A saline aperient was given, but the next day all the symptoms increased; there was marked œdema of the face; this quickly subsided, and in a few days the patient was quite well. In fact, the inflammation disappeared as quickly as it came. The ointment was found to contain about 40 grains of white precipitate to the ounce. (A similar case is noticed in the *Journal*, December 1883. p. 1281.)

2835. *Garraway on the Affinity of Chloroform for Strychnia.*—Mr. Garraway, in the *Brit. Med. Jour.*, May 1884, p. 995, publishes, as a caution, the following case. The prescription below was prepared for a lady. ℞ Liquoris strychniæ, ʒj.; spiritûs chloroformi ʒiij.; aquæ ad ʒjss. Misce. One drachm was ordered to be taken three times a day. Upon taking the final dose, the patient was seized with spasmodic contractions of the extensors of the feet and legs. These symptoms soon passed off, but caused much alarm at the time. On examining the bottle which had contained the medicine, a drop or two of water was seen remaining in it, and beneath this a globule of chloroform, which proved to be highly charged with strychnia, the insoluble chloroform having abstracted the strychnia from its solution. This teaches the propriety of giving strychnia, when combined with spirits of chloroform, in a state of greater dilution than that ordered above.

2836. *Robertson on Injection of Solution of Corrosive Sublimate in Prostatic Retention of Urine.*—Mr. W. Robertson, in the *Brit. Med. Jour.*, May 1884, p. 949, relates a case of retention of urine from enlarged prostate, with catarrh of the bladder, treated with corrosive sublimate injections of the strength of 1 in 1,000. Three ounces of the warm solution were injected night and morning, giving great relief from pain, restoring the urine to its healthy appearance, together with the propulsive power of the bladder. The author states that, after having used other injections, he is strongly in favour of corrosive sublimate.

2837. *Lister on Solution of Corrosive Sublimate.*—In the *Brit. Med. Jour.*, May 1884, p. 1018, Sir J. Lister corrects a mistake made in the journal of Feb. 23, p. 365, where it is stated that a solution of corrosive sublimate of 1 in 1,000 may be made by adding one drachm of the glycerine solution to one and a half pints of water. In the third edition of Martindale's *Extra Pharmacopœia*, it is pointed out that a fluid drachm of the glycerine solution requires four pints of water to produce the 1 to 1,000 solution of corrosive sublimate.

2838. *Ewart on the Treatment of Dysentery by Ipecacuanha.*—Dr. Joseph Ewart, in the *Lancet*, May 1884, pp. 794 and 838, contributes an article on the treatment of simple and sloughing dysentery by large doses of ipecacuanha *given morning and evening only*. When the question is tested clinically, it is found that the vital depression caused by a quick and prolonged succession of small doses is far greater than when large ones are given at longer intervals of time. When given in doses from a scruple to a drachm every twelve hours, the disagreeable effects of each dose, nausea, retching, or vomiting, pass off in about an hour or so. After citing some cases, and quoting the opinions of several authorities, Dr. Ewart sums up by stating how ipecacuanha acts. 1. Directly and locally, it acts as a slight irritant upon the peripheral nerves of the mucous membrane of the stomach, provoking anorexia, nausea, vomiting. 2. It augments the aqueous character of the secretion of the salivary glands, and of the secretions along the whole of the alimentary mucous tract. 3. It increases the flow of healthy and unirritating bile, thus depurating the blood, and producing a comforting laxative action, relieving the local congestion and portal plethora, and soothing the diseased parts subsequently by the promotion of physiological repose. 4. It diminishes the force and frequency of the pulse by lowering vascular tension generally. 5. It promotes general diaphoresis. Dr. Rutherford, in the *Brit. Med. Jour.*, Feb. 8, 1879, says, 'Ipecacuanha is a powerful hepatic stimulant. It increases slightly the secretion of the intestinal mucus, but has no other apparent stimulant effect upon the intestine. The bile secreted under the influence of ipecacuanha has the normal composition.' The value of ipecacuanha in dysentery is, therefore, due—(*a*) to its power of restoring to equilibrium the portal circulation, and thus tending to remove the congestion and strain on the inflamed structures of the colon; and (*b*) to its influence in augmenting the secretion of healthy bile.

2839. *Hill on Strathpeffer as a Health-Resort.*—Mr. Berkeley Hill, in the *Lancet*, May 1884, p. 793, speaks highly of Strathpeffer, in Ross-shire, as a health-resort. The great natural capacity of the locality, and the high value of its mineral waters, need only moderate development to make the place a favourite resort for the gouty or rheumatic invalid. The atmosphere is drier and more equable than in many parts of Scotland, the rainfall being 25·30 inches, and the number of rainy days less than in London. The copious sulphur-springs are some of the strongest in the world. They contain more than double the amount of sulphuretted hydrogen held in solution by the Harrogate waters; while those of Aix-la-Chapelle, being hot, contain none, or next to none, of uncombined sulphur dissolved or suspended in the water. The salts, chiefly lime, soda, and magnesia, are scanty; hence they are not aperient, though highly diuretic, and in this quality excel the waters of Continental springs. The quantity to be drunk varies with the nature of the case. The late Dr. Manson, the resident physician, prescribed them to be taken twice daily, between 6.30 and 8 A.M. and from noon to one o'clock, and from two to three pints to be drunk each time. The sulphur-water is also artificially heated for bathing and for inhalations. The length of a course extends from three to six or eight weeks. By the possession of a very remarkable and almost unique chalybeate spring, in addition to its bracing air and clear atmosphere, Strathpeffer is peculiarly suited for the cure of anæmia and other affections for which iron is useful.

2840. *Bennett on the Effects of the Prolonged Administration of the Bromides in Epilepsy.*—In the *Lancet*, May 1884, p. 883 and p. 928, Dr. Hughes Bennett contributes an able article on his experience of 300 cases of epilepsy treated with the bromides of potassium and ammonium, and directs attention to the effects of the prolonged administration of large doses of these drugs, with the view of ascertaining if, while arresting or diminishing the frequency and severity of the paroxysmal symptoms, they beneficially influence the disease itself, or in any way injuriously modify the constitution of the patient. A number of tables are constructed, which show that in the majority of cases the physical and mental powers do not appear to be injuriously affected. To the suggestion

that their prolonged use becomes, as in the case of opium, a habit, it is argued that, though their consumption become a necessity, if it can be shown that the results are not serious, while the evils they avert are important, the habit acquired may be looked upon as a justifiable one. The author has every reason to believe that the use of the bromides in large doses and for a prolonged period tends towards the eradication of the disease.

2841. *Thomson on some Evidence with Regard to Salicylate of Soda.*—Mr. Thomson, in the *Lancet*, May 1884, p. 932, publishes notes of two interesting cases, illustrating the connection between tonsillitis and rheumatic fever, and showing that salicylate of soda in large doses gives marked and speedy relief to certain cases of tonsillitis. One case was that of a lad, aged 19, who developed acute tonsillitis after he had been taking the remedy during nine days for rheumatic fever. The second case occurred in a man, aged 25, who was treated for acute tonsillitis by salicylate of soda, but on the ninth day was attacked with rheumatic fever with cardiac complications. He was under treatment for some weeks, with effusion into several joints, with a distinct to-and-fro bruit, heard at the third left intercostal space, and a soft systolic murmur audible at the apex.

2842. *Allen on the Treatment of Hay-Fever.*—In the *American Jour. of Med. Science*, Jan. 1884, is a paper by Dr. Harrison Allen on 'The Treatment of Hay-Fever and Allied Disorders,' in which the author alleges that the means of effecting the cure in this disease is simply to overcome the tendency to obstruction in the nasal chambers. The symptoms of hay-fever are always associated with some degree of obstruction in one or both nasal chambers. One cause of this obstruction is dilatation of the blood-vessels. In a small group of cases, where, in addition to symptoms due to obstruction, other signs and symptoms become prominent, these are attributed to mental impression. Dr. Allen reports six cases, and from these the following conclusions are drawn. 1. The treatment of all conditions of obstruction in the nasal chambers can be successfully carried out by destroying the cause of obstruction. 2. The treatment of hay-fever and allied periodically recurring nasal affections, in no way differs from the treatment of other nasal diseases accompanied by obstruction, and the treatment may be conducted during an attack, as well as in the intervals between the attacks.

2843. *Hurd on Hyoscyamine in Insanity.*—Dr. Henry Hurd, in the *American Journal of Insanity*, states that Merck's amorphous hyoscyamine, in doses of $\frac{1}{24}$ to $\frac{1}{20}$ of a grain, controls convulsive seizures, and prevents excitement or irritability. At the Canada Medical Association, in Sept. 1883, Dr. Metcalfe said that, used hypodermically, hyoscyamine acted more quickly and surely than any other narcotic. He gives doses of $\frac{1}{12}$ to $\frac{1}{10}$ of a grain. Maniacs require larger doses than melancholics. [The reporter would give a warning that such doses are often followed by very unpleasant symptoms.—*Rep.*]

2844. *Bartholow on the Treatment of Albuminuria by Nitroglycerine and the Chloride of Gold and Sodium.*—Dr. R. Bartholow, in the *Boston Med. and Surg. Jour.*, Jan. 10, 1884, contributes a paper on the use of nitroglycerine in cases of albuminuria. In acute cases, it should be given immediately on the subsidence of the acute symptoms. In chronic cases it is indicated at all periods, but more especially before hypertrophy of the muscular layer of the arterioles has taken place. When it acts favourably, the amount of albumen in the urine steadily diminishes. The dose is, to begin with, one minim of the 1 per cent. solution, increased until very characteristic physiological effects are produced; the interval between the doses should not exceed three or four hours. The double chloride of gold and sodium is indicated in the subacute and chronic cases, especially the latter. The usual dose is one-twentieth of a grain twice a day, to be increased if necessary. If this dose cause indigestion, gastralgia, nausea, &c., it must be diminished.

2845. *Burman on Iodoform in Erysipelas.*—Mr. Burman, in the *Practitioner*, May 1884, p. 365, publishes four cases, illustrating the well-marked property of iodoform to stop the progress of erysipelas. It is used combined with collodion, one ounce of iodoform being mixed with ten ounces of collodion, the part affected being painted well beyond the line of redness. This promptly relieves the burning, and all symptoms rapidly subside.

2846. *Poore on the Choice of Electric Batteries.*—Dr. G. V. Poore, in the *Med. Times and Gazette*, April 1884, p. 549, contributes a paper on the choice of electric batteries. First, as to the galvanic battery; the best elements are the Leclanché elements, or one of the modifications of them which are now made. It is not necessary to have more than twenty cells in a battery. Accessories in combination with the battery should be avoided; the current-reverser and galvanometer should be purchased as separate apparatus, and placed in circuit when required. A rheostat is neither necessary nor advisable for ordinary clinical purposes. Faulty junctions and connections are the great causes of failure in batteries, and these causes of failure exist equally in the conducting wires and rheophores. The ordinary conductors, made of plaited metal thread covered with wool or silk, are abominations not to be tolerated. Telegraph wire (copper wire covered with gutta-percha) is infinitely preferable to the ordinary conductor. As regards rheophores, on the whole, moist sponges are the best, and that designed by Kidder, of New York, is the most useful.

2847. *Richardson on the Cold Bath Treatment of Enteric Fever.*—In noticing Dr. Sidney Coupland's paper on the cold bath treatment of 'enteric fever,' and the good services rendered by this method, Dr. Richardson, in the *Asclepiad*, April 1884, p. 183, raises the question, why Dr. Coupland holds by such a clumsy and disagreeable method as the baths when, with Leiter's pliable metallic tubes, he can secure the same reduction of temperature without removing the patient from bed.

2848. *Richardson on the Use of Ammoniated Chloroform.*—In the *Asclepiad*, April 1884, p. 158, an account is given by Dr. B. W. Richardson of the preparation and uses of ammoniated chloroform. It is made by mixing together equal parts of the strong solution of ammonia in alcohol and chloroform. The therapeutic intentions of the inhalation are to reduce febrile temperature, to relieve pain, and to maintain the alkalinity and fluidity of the blood. Under its administration the author has seen the febrile temperature reduced 2° in four hours, and 4° in twelve hours. This reduction has been sustained by continuance of inhalation until it has become permanent. Cases of puerperal peritonitis, acute rheumatic fever, scarlet fever, and septic

pyrexia, are those in which the inhalation of ammoniated chloroform is most promising of good results.

2849. *Richardson on the Use of Crushed Ice and Lard in the Treatment of Burns and Scalds.*—In the *Asclepiad*, April 1884, p. 164, the treatment of burns and scalds by crushed ice and lard is warmly advocated. To put the method into practice, ice is well crushed or scraped, as dry as possible ; then fresh lard is admixed until a broken paste is formed. The mass is then put into a thin cambric bag, laid upon the burn or scald, and replaced as required. The pain is rapidly eased, and its return is the call for the repetition of the remedy. This mode of treatment is as scientific as it is simple. It saves at once the fever incident to pain, and it leaves very little contraction of surface.

2850. *Richardson on the Internal Administration of Amyl-Nitrite.*—Dr. Richardson, in the *Asclepiad*, April 1884, p. 165, states that, in introducing amyl-nitrite into medicine in 1863, he recommended its administration by inhalation, but, for some years past he has found it advantageous, in some cases, to administer it by the mouth. The most convenient formula is as follows. ℞ Amyl-nitrite, ♏xxxvj. ; ethylic alcohol, sp. gr. 830, ʒvj. ; glycerine, to ʒjss. To make a mixture of twelve doses ; one fluid drachm for a dose, in a wine-glassful of warm water ; to be taken every two or three hours, if necessary. The relaxation produced is often longer continued than when the same dose is inhaled.

2851. *Richardson on the Administration of Alcohol previously to Chloroform or Methylene Bichloride.*—Dr. B. W. Richardson, in the *Asclepiad*, April 1884, p. 159, states that he has always given alcohol previously to the administration of chloroform or methylene bichloride. By imbibing a dose of alcohol a short time before the inhalation of chloroform, the second degree of chloroform narcotism, the convulsive excitement, is reduced to a minimum. To be reliable, the dose for an adult is from four to six fluid drachms of pure ethylic alcohol of sp. gr. 830. The alcohol should be taken in eight ounces of water, at a temperature of 95° to 100° F., twenty minutes before the anæsthetic is administered.

2852. *Hicks on the Utility of Coca.*—Dr. Hicks, in the *New York Med. Jour.*, Feb. 23, 1884, enumerates the following circumstances under which he has found coca extremely useful. 1. To prevent and relieve fatigue. 2. In back-ache, accompanied by high-coloured urine, with excess of uric acid and urates. 3. In short breathing from weakness of the muscles of inspiration. 4. In palpitation, without valvular lesions, due to dilatation or weakness of the heart muscle. 5. It renews the vigour of the intellect, and relieves mental exhaustion, rendering the flow of thought more easy, and the reasoning powers more vigorous. 6. It dissipates the 'blues,' leaving the mind calm. 7. It destroys the craving for alcohol, and, in small doses, is useful in sick headache, and the headache resulting from over-exertion. 8. Its habitual use as a part of the daily diet conduces to mental clearness and activity, freedom from fatigue, and sound sleep. [Much valuable information on the use of coca may be gleaned from sect. 455 : 4 of the *Medical Digest.—Rep.*]

2853. *Crook on the Properties of Kairin.*—Dr. Crook, in the *Philadelphia Med. News*, March 22, 1884, states that the investigations thus far made with regard to kairin justify the following conclusions. 1. It is a decided febrifuge, rapid, though somewhat fugacious in its action. 2. It diminishes the frequency of the heart's action to some extent, though the pulse-rate does not fall *pari passu* with the temperature. 3. The symptoms of collapse may be entirely or in a large degree avoided by close attention and the proper use of stimulants. 4. It is a tolerably constant diaphoretic. 5. Its action in intermittents warrants the belief that it possesses valuable antiperiodic properties. 6. Though it may not possess all the properties of the alkaloid quinine, enough has been learned of its action to justify the hope that a perfect substitute may yet be found.—[*Vide* LONDON MEDICAL RECORD, 1884, p. 116.]

2854. *Wale on Inunction of Quinine.*—In the *Louisville Med. News*, March 29, 1884, Dr. Wale's highly favourable opinion of the great efficacy of quinine mixed in lard as an inunction is quoted. It is especially useful as a means of treatment of intermittent fever or other malarial diseases in infants. To be effectual, the rubbing in must be completed several hours before the expected paroxysm. The amount employed is about three times that required when given by the mouth. This is mixed with a teaspoonful of lard, divided into three parts, and rubbed on to the inner side of the thighs and groins, one part every two or three hours. For young infants, a larger dose is often called for than in older ones.

RICHARD NEALE, M.D.

2855. *Mader on a Modification of Leiter's Tubes.*—Dr. Mader, of Vienna, in the *Wien. Med. Blätt.* of Feb. 21, recommends a modification of Leiter's metallic tubes for conveying water over the skin for cooling purposes, the chief change being the substitution of India-rubber tubing. This can be stitched on a piece of calico or flannel of the size and shape required, care being taken to avoid sharp turns, which would diminish and even obstruct the calibre of the tube. The advantages of this form of the apparatus are the ease and cheapness with which it can be prepared, its durability, and the ease with which a bend in the tube can be rectified, such an occurrence in a metallic tube rendering the whole apparatus useless. It is also much more pleasant in application than a metal tube, being lighter and smoother, so that it is suitable for many cases, such as peritonitis, where a metallic tube could not be thought of. Its chief disadvantage is the lower conducting power of the India-rubber, preventing the water from being felt so cold as in the metallic tube ; but as the part of the body wearing the apparatus has been found to have a temperature from 17° to 20° R. (30° to 45° F.) lower than the rest, this apparent disadvantage is not real. For hospital use, Dr. Mader suggests that the afferent tube should be attached to the water-pipe supplying the ward (a small cistern being interposed to prevent bursting from sudden increase of pressure), and the efferent tube led to the waste-pipe, so that the time, trouble, and disturbance necessary for the frequent emptying and filling of vessels may be avoided.

ALICE KER, M.D.

2856. *Chéron on the Treatment of Metrorrhagia by Savin and Rue.*—The author states (*Revue de Thérap. Med. et Chir.*, No. 10, 1884) that these drugs are often very useful, even in cases where ergot of rye and ergotin have failed. They are best administered in the form of pills, containing each 5 centigrammes of rue and the same quantity of savin, in powder. The ordinary dose is one pill night and morning.

J. S. KAESER, M.D.

2857. *Liakhnitzky on the Pharmacology of Cantharidin.*—Dr. Evgeny A. Liakhnitzky's very able inaugural work (*St. Petersburg Dissertation*, 1884) will undoubtedly take a prominent place among contributions to the study of the pharmacological action of cantharides, side by side with the works of Schroff, Radecki, and Alessandro Cantieri. The author made his researches at the laboratory of Professor P. P. Sushtchinsky in St. Petersburg, and used for his numerous experiments frogs, dogs, and rabbits, into which he introduced, by various ways, both cantharidin and cantharidate of soda. He sums up the results of his nearly two years' investigations as follows. 1. The physiological action of cantharidate of soda (natrium cantharidinicum) is identical with that of cantharidin. 2. Cantharidin (and cantharidate of soda) produces an increase in frequency of the heart's action, in consequence of paralysis of the vagus. 3. It does not display any strongly manifested influence on the arterial tension, since the latter is lowered only under toxic doses, in the period before death, and then mainly in consequence of a growing weakness of the cardiac muscle. 4. It causes a retardation of respiration in cold-blooded animals from the very beginning, and in the warm-blooded after a preceding acceleration, the phenomenon being dependent upon the weakening of the respiratory centre. 5. It does not change the excitability of muscles or of the motor and sensory nerves. 6. In cold-blooded animals there is observed a loss of reflexes, which depends mainly upon the lesion of reflex centres in the spinal cord. 7. The main ways of elimination of cantharidin out of the system are the kidneys, the intestines, and the salivary glands. 8. On its being introduced into the blood, cantharidin is found almost in all organs of the body, but its greatest quantities are detected in the liver, kidneys, salivary glands, and grey matter of the brain. 9. The lesions of the bowels, which occur even on extravenous injections, present one of the most marked symptoms of poisoning by cantharidin. These lesions are caused by secretions of cantharidin by the intestinal mucous membrane. 10. Cantharidin produces slight oscillations of the temperature, in general tending to lowering the latter. [We may as well mention here a recent work on cantharidin by another Russian observer—namely, by Dr. Idalia Eliasheva, of Mogilev, who, under the guidance of Professor Langhans, in Berne, studied the action of the drug on the kidneys (*see* her inaugural work, *Ueber die Wirkung des Cantharidins auf die Nieren*, 1883), in order to elucidate the discrepancies existing between the results of Shakhova and those of Cornil. Shakhova (*see* her inaugural dissertation, *Untersuchungen über die Nieren*, 1876, Berne) found that cantharidin produced the most intense inflammatory changes in the convoluted tubes, and did not affect the glomeruli. Cornil, on the contrary (*see* his *Sur les Lésions du Rein et de la Vessie dans l'Empoisonnement Rapide par la Cantharidine*, in the *Comptes Rendus*, 1880, pp. 188 and 536), pointed out that the inflammatory process chiefly attacked the glomeruli. Eliasheva also found glomerulo-nephritis in all animals poisoned by cantharidin, and thus confirmed Cornil's statement.—*Rep.*]

2858. *Maklakoff on Jequirity.*—Dr. Maklakoff, of Moscow, reports (*Vratch*, 1883, No. 9) excellent results obtained by him in ten cases of trachoma, chronic blennorrhœa, and pannous keratitis, treated by infusion of jequirity. The author finds that the new caustic stands far higher than sulphate of copper or mitigated nitrate of silver. Prof. N. V. Sklifosovsky expects that jequirity may prove useful also in the treatment of profound alterations of the synovial membrane of the joints.

2859. *Kaczorowski on the Treatment of Inflammation by Subcutaneous Injections of Morphia.*—Dr. Kaczorowski (*Przeglad Lekarski*, and *Vratch*, No. 5, 1883) recommends hypodermic injections of morphia, made as nearly as possible to the part affected, and repeated several times daily, as an excellent antiphlogistic remedy, especially in cases of inflammation of serous membranes. For the sake of illustration, the author quotes a case of incipient *peritonite foudroyante* after an operation for hydatids in the liver, where a part of the purulent contents of the cyst found its way into the peritoneal cavity, and where the patient recovered, in consequence (as the author thinks) of the energetic use of morphia injection; at first two centigrammes every two hours, and subsequently one centigramme every four hours being administered.

2860. *Petersen on Magisterium Bismuthi in Chancre, Balanitis, Eczema, &c.*—In the *Vratch*, No. 16, 1884, p. 267, Dr. O. V. Petersen, of Alexandrovsky Hospital, St. Petersburg, states that he successfully treated 300 cases of soft chancre by the application of subnitrate of bismuth. Ulcers were washed with a solution of mercuric chloride (1 to 2000), then cleansed and dried by means of a piece of salicylic cotton-wool, and finally slightly powdered with subnitrate of bismuth, and covered with a piece of the said cotton-wool. The procedure was repeated several times daily. Ulcers rapidly became thoroughly dry, pale, and the cicatrisation followed. Still more successful subnitrate of bismuth proved in cases of balanitis with profuse discharge, the cure often following already after two applications of bismuth powder. The author saw also favourable results from the use of the powder in cases of wet papulæ, eczema, and chapped nipples. [Magisterium bismuthi, as an application for chapped nipples, in the form of powder, or, better, in an ointment (2 drachms to half-an-ounce of vaseline), was highly recommended also by Dr. V. G. Favr in the *Vratch*, 1881, No. 52, p. 889.—*Rep.*]

2861. *Bogoluboff on the Treatment of Phagedænic Chancre by Pyrogallic Acid.*—In the *Meditz. Pribavl. k' Morsk. Sborn.*, Dec. 1883, p. 35, Dr. N. F. Bogoluboff, of Cronstadt Marine Hospital, describes his utter disappointment in regard to the method recommended by Dr. Vidal (*see* the London Medical Record, Feb. 1884, p. 68). Nine cases of phagedænic chancre were selected and treated by pyrogallic acid either made into an ointment (1 to 20 of fat) or in the shape of a powder (1 to 20 of lycopodium). The acid did not destroy phagedænism, but produced irritation of the edges of the ulcers, inflammation and œdema of the surrounding tissues, and burning pain, the latter in the beginning being slight and transitory, but later on constant and intolerable. All the cases grew worse under the pyrogallic treatment, and rapidly improved and were ultimately cured under the subsequent application of iodoform. The author thinks that pyrogallic acid ought to be discarded from the list of medicaments fit for the treatment of phagedænic ulcers.

2862. *Bogoluboff on the Treatment of Eczema and Itch by Liquid Storax.* — Following the recommendation by Dr. Amicus (in the *Ann. de Dermatol.*

et de Syphil., No. 1, 1883), Dr. N. F. Bogoluboff (*Meditz. Pribavl. k' Morsk. Sborn.*, Dec. 1883) tried liquid storax in the shape of an ointment made of a desirable quantity of the drug to three parts of olive oil with one-sixth part of spirit, in forty cases of eczema and itch. He found it a very efficient substitute for Wilkinson's and Hebra's ointments in all chronic cases. The advantages of storax are as follows. It does not irritate the skin; it has a pleasant aromatic odour; it closely sticks to the parts; and, lastly, it is cheap. In acute cases of eczema, however, storax is contra-indicated, since it nearly always aggravates the condition of the diseased parts.

2863. *Rosenblum on the Use of Trichlorphenol.*—Dr. Rosenblum, of Kaluga (*Russkaia Meditzina*, No. 17, 1884), eulogises trichlorphenol as an antiseptic, pain-soothing, and cooling application in cases of gangrenous, cancerous, and chancrous ulcers. He used one per cent. solution of trichlorphenate of lime (prepared as indicated by Dr. Dianin; *see* the LONDON MEDICAL RECORD, April 1883, p. 132), united in various proportions with olive-oil. Trichlorphenol is seven times cheaper, and, as an antiseptic, twenty-five times stronger than carbolic acid. Its preparation is extremely easy. Pointing to these facts the author expresses his hope that trichlorphenol will with time take the place of carbolised oil, at least in country practice. Dr. Rosenblum thinks that the single drawback of the new antiseptic is its unpleasant odour. [Several other papers treating the same subject may be found in the LONDON MEDICAL RECORD, 1883, pp. 196, 323, 506.—*Rep.*]

2864. *Grigorieff on Alum in Intermittent Fever.*—The observations recently published by Shidlovsky (*see* the LONDON MEDICAL RECORD, April 1884, p. 163), Savvinsky and Soltykoff (*ib.*, May, p. 209), induced Dr. A. Grigorieff, of Temir-Khan-Shura, Dagestan, to try (*Russkaia Meditzina*, No. 14, 1884) alum, in eight-grain doses, in 22 cases of intermittent fever (12 of the quotidian, 7 of the tertian, and 3 of the quartan variety). While Shidlovsky and Savvinsky obtained 100 per cent., and Saltykoff 26 per cent. of cures under the alum treatment, Dr. Grigorieff saw the disappearance of paroxysms only in 9 per cent., namely, in 2 cases of tertian fever of a mild type. The author thinks that alum may prove of value in certain slightly malarial districts, but that it is entirely unfit for the treatment of Caucasian intermittent fever.

2865. *Tzitovitch on the Action of Cold and Hot Chapman's Bags.*—Dr. Andrei Tzitovitch (*St. Petersburg Inaugural Dissertation*, 1884) applied Chapman's bags to various parts of the vertebral column in six healthy and six diseased persons, and studied their action on the temperature of the body, pulse, and electro-cutaneous sensibility. His results may be summarised thus. 1. Neither cold nor hot Chapman's bags, be they applied to the superior or inferior parts of the spine in the healthy or in the diseased, do produce any changes in the temperature of the system, or of any individual region of the body. 2. The action of cold bags on the circulation is but very slight, and that of hot bags still more so. In some cases a rise, and in some a decrease, of the blood-pressure is observed. In other cases again slight alterations in the frequency or strength of the cardiac action follow. The application of bags of the kind given is followed by inconstant results. The latter appear during the application, and disappear shortly after the removal of bags. 3. The electro-cutaneous sensibility suffers no change under the influence of Chapman's bags. 4. Chapman's bags cannot either cool or warm the spinal cord or sympathetic ganglia.

2866. *Tcherniavsky on Wet Packings.*—Dr. Ivan Tcherniavsky (*St. Petersburg Inaugural Dissertation*, 1884) has studied the action of wet packings on thirty (mainly healthy) subjects. The temperature of the water used varied from 12° to 23° R.; that of the room from 15° to 23° R.; the duration of packings from 35 to 60 minutes. The author came to the following results. 1. The axillary as well as rectal temperature falls (0·11° C. in the axilla, 0·02 in the rectum) within the first 15 minutes of packing; then, within the next 15 minutes, it rises (0·13° resp. 0·06°), the rise continuing to the end of packing, though at a lesser rate (0·04° resp. 0·03°). 2. The cardiac action becomes slower. 3. Respiration becomes more frequent. 4. The weight of the body falls (at the greatest, by 250 grammes). 5. The muscular strength increases. 6. Electro-cutaneous sensibility after packing is augmented. 7. Wet packings may be placed in the category of weak sudorific means. 8. As a sudorific, wet packings possess several drawbacks. Thus, they sometimes produce perspiration only after persevering for hours, and cause, accordingly, a considerable discomfort to the patient. The skin after packing becomes softened, wrinkled, macerated, and loses its elasticity, and probably its perspirative faculty. 9. Wet packings may be useful as a sedative for the nervous system, as it was pointed by Lehmann, Seeligmüller, and others.

2867. *Landsberg on the Changes of Morphia in the System.*—From some experiments on the animals into which morphia was introduced either through the mouth or under the skin, or by intravenous injection, Dr. Landsberg (*Vratch*, 1883, No. 7) comes to the conclusion that the blood and viscera possess a considerable power of decomposing the alkaloid; hence the urine contains almost always only various products of the decomposition of morphia. The author found the latter in the urine only in three cases where the alkaloid was introduced into the system in enormous quantities, and where the decomposing power of the blood was probably exhausted. Only once he succeeded in detecting morphia in the blood, when the latter was subjected to the examination in ten minutes after a subcutaneous injection. On introduction into the stomach, a part of the alkaloid may be eliminated through vomiting and fæces. When introduced under the skin, morphia is not retained in the cellular tissue; therefore it would be impossible to explain its non-detection in the blood in this way. Toleration in regard to greater quantities of morphia, as observed in habitual morphia-consumers, consists in the increase in the system of the faculty of decomposing the drug.

2868. *Kiseleff on the Treatment of Pneumonia by Cold Baths.*—In the *Vratch*, 1883, Nos. 7 and 8, Dr. M. K. Kiseleff states that in 1880 forty-four patients with pneumonia were admitted to the Grozuyi Military Hospital; twenty-three of them were treated by cold baths, at the temperature of 28° to 26° R., with gradual cooling to 16° or 12° R. The baths were made daily, between 4 and 6 P.M., and lasted from ten to fifteen minutes. Before and after each bath the patients received from 3 to 6 ounces of sherry or *vodka* (*eau de vie*). The results

were as follows. 1. The mortality amongst the patients treated by baths was lower than amongst those left without baths (respectively 17·7 per cent. and 57·1 per cent.) 2. The curves of morning and evening temperatures, the pulse and respiration, did not present any great differences; but while in the patients left without baths a high temperature lasted all day long, in those treated by baths it fell 1·5° to 3° C. for four or five hours daily. Further, the pulse after each bath decreased from ten to twenty beats, and pain disappeared. The respiration remained unchanged. 3. Crisis in bath-cases occurred apparently earlier (in 3 cases on the third day, in 2 on the fourth, in 2 on the 5th, in 2 on the seventh, in 2 on the 8th, in 5 on the 6th, in 1 on the ninth, in 4 on the 10th, in 2 on the thirteenth; while in the cases left without baths crisis frequently occurred on the ninth day). 4. Cold baths had no influence on the frequency of complications, but the latter ran a more favourable course. 5. Recovery proceeded more rapidly (nineteen patients treated by baths recovered between the tenth and twenty-seventh day since the appearance of first symptoms). In 1881 and 1882, Dr. Kiseleff treated other forty-nine patients by cold baths. Only three (6·12 per cent.) died. Crisis occurred not later than on the eleventh day, most frequently on the sixth and ninth. The patients left the hospital in three or four weeks, being quite strong and sound. The author's general conclusion is, that cold baths present a powerful therapeutic agent in the treatment of pneumonia. He points also to such important advantages of baths as disappearance or diminution of pain, absence of delirium, advent of quiet sleep, &c.

2869. *Kuprianoff on the Diuretic Action of Common Lovage Root.*—Dr. Kuprianoff (*Vratch*, 1883, No. 18) states that in a case of dropsy of non-renal origin he successfully administered, as a diuretic, an infusion of one ounce of common lovage root (*Radix Levistici*) to six ounces of water. The daily quantity of urine within two weeks rose from 450 c. c. to 1,500 c. c. The preceding administration of all possible diuretics had entirely failed in this case. V. Idelson, M.D.

2870. *Renon on the Application of the Antiseptic Method to the Treatment of Croup and Diphtheritic Angina.*—The author (*Gazz. di Med. Pubblica*, April, and *Gazz. Med. Ital. Prov. Venete*, May 10) has been trying the use of inhalations of carbolic and salicylic and benzoic acids in the state of vapour, and not as pulverisations. The latter are somewhat difficult of application, and often cause a harmful chill, and they probably do not reach the ultimate parts of the air-passages as is desirable. The author places the patient in a moderate-sized room, heated to about 26° C., with good ventilation. Over a fire or lamp a vessel, containing about two litres of water, is heated, and the antiseptic is added from time to time. The apparatus should be near to the bed, and the vapour kept near the patient by a suitable arrangement of curtains. The formula he adopts is the following:—carbolic acid, 280 grammes, salicylic acid, 56 grammes, benzoic acid, 112 grammes, and rectified spirit, 468 grammes. Every three hours a tablespoonful of this solution is added to the boiling water. This quantity generally suffices; in two cases symptoms of carbolic poisoning appeared, when of course the strength must be lowered. When tracheotomy has been performed, besides keeping the patient in the antiseptic atmosphere, Renon places before the cannula a loose bit of carbolised wool, fixing it with a carbolised bandage. His results are—angina diphtheritica and croup with tracheotomy, seven cases, seven cures; six cases without tracheotomy, six cures; three successful cases of diphtheria without laryngeal complication.

2871. *Queirolo on Plethysmographic Researches on Fever and Kairin.*—The alteration of the power which the skin possesses of regulating the dispersion of caloric is generally admitted as the most important factor in the production of fever; and this factor has acquired still more importance, since it has been demonstrated that the sole retention of heat may produce increase of temperature, and that in some cases of fever the quantity of heat retained may represent the entire increase of temperature observed. The dispersion of heat takes place, as is well known, by means of the cutaneous circulation, and is hence subject to the oscillations which the circulation of the blood in the skin undergoes, oscillations due to the functional state of the blood-vessels. Precise knowledge of the behaviour of the peripheral vessels in fever is hence of the greatest importance. The author (*Gazz. Med. Ital. Prov. Venete*) has made a series of observations with the 'plethysmograph' of Professor A. Mosso on the oscillations of the cutaneous vessels in fever, and at the same time has studied the modifications induced by kairin in the calibre of the cutaneous vessels. The observations were made on healthy individuals, and for kairin on individuals feverish from various causes, intermittent fever, croupous pneumonia, and typhoid fever. The plethysmograph was applied to the forearm, and the thermometer placed in the axilla, and both were allowed to remain for from four to eight hours. His conclusions, relatively to fever, are these. 1. The rise of febrile temperature is accompanied by a constriction of the peripheral vessels. 2. The constriction of the vessels precedes by some little time the initial rise; and the successive rises of temperature are equally preceded by constriction of the vessels. 3. The greater and more rapid the increase of temperature, the greater the constriction of the vessels. 4. The defervescence of the fever is accompanied by relaxation of the peripheral vessels. 5. The dilatation of the vessels precedes by some little time the defervescence of the fever. 6. To an arrest in the defervescence of the fever, an equal arrest in the dilatation of the vessels corresponds. 7. These facts are observed in fevers depending on different causes. Relatively to kairin, his conclusions are these. 1. Kairin, administered to apyretic individuals, produces a notable dilatation of the peripheral vessels. 2. In fever patients, kairin produces contemporaneously fall of temperature and dilatation of the vessels. 3. The vessel dilatation precedes somewhat the fall of temperature. 4. When the action of kairin is exhausted, the exacerbation of the fever is accompanied by constriction of the vessels. 5. The contraction of the vessels precedes somewhat the elevation of the temperature. From these facts, it appears probable that the defervescence and the apyrexia due to kairin are produced at least in part by the same mechanism by which are produced spontaneous defervescence and apyrexia.

2872. *Leblond on the Physiological and Therapeutical Action of Caffein.*—From numerous experiments on man and animals, the author (*Gaz. Hebdom. de Méd. et de Chir.*, 1884) comes to the following conclusions. Caffein in physiological doses excites the nerves and muscles; it diminishes the frequency of the pulse, increases the energy of the cardiac con-

traction and vascular pressure; on the other hand, it lowers the peripheral temperature, and has no influence on the formation and elimination of urea. In poisonous doses it exaggerates the excito-motor action of the spinal cord, paralyses the peripheral sentient nerves, and diminishes the excitability of the pneumogastric; it rapidly lowers the blood-pressure, paralysing the vaso-motor nerves. In cold-blooded animals, it progressively retards the action of the heart, which it finally arrests in systole; whilst in warm-blooded animals it progressively accelerates the heart, and finally arrests it in diastole. Caffein has a tetanising action on the muscles; it rapidly lowers the temperature, and increases in the tissues the process of decomposition. Therapeutically, it is better tolerated than digitalis, especially in small doses. It moderates the action of the heart, strengthening the beats and diminishing their frequency; it produces a more or less abundant diuresis. Not only is it a good adjuvant to digitalis, but may be almost always substituted for it in grave cases, especially when there is fear of syncope, when it acts more safely and promptly than digitalis. It is well to begin with a small dose (20 centigrammes), to test the susceptibility of the patient, increasing the quantity to 50 or 75 centigrammes when it is necessary. Large doses are not recommended. It may always be given when it is necessary to suspend the use of digitalis, or when this gives unfavourable results. In inflammation, it is useful to reduce the temperature, and as a cardiac tonic. Great advantages are often obtained from it in cases of albuminuria, whether of cardiac origin or not. Lastly, it seems to act on the muscular coat of the intestine in cases of strangulated hernia.

2873. *Testa on Iodoform in the Treatment of Gout.*—Testa, in a preliminary note in the *Gazz. Med. Ital. Prov. Venete* for May 31, 1884, draws attention to the good effect of iodoform in gout. Moleschott has already employed it as a topical application in this disease with great advantage, but Testa recommends its internal administration, and this because iodoform, according to the researches of Fubini and Spallitta, accelerates tissue metamorphosis and increases the daily quantity of urea. Iodide of potassium they find, contrary to the opinion generally held, retards tissue-change and diminishes the quantity of urea. Testa, by experiments on a healthy man, confirms the views of Fubini and Spallitta, and finds moreover that, contemporaneously with the increase of the urea, the uric acid is diminished.

G. D'ARCY ADAMS, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

2874. FITZMAURICE.—Puerperal Eclampsia, treated by Chloral-Hydrate. (*Brit. Med. Jour.*, April, p. 715.)

2875. CUMMINS.—The Cooling Bath in a Case of Puerperal Scarlatina with Hyperpyrexia. (*Brit. Med. Jour.*, April, p. 760.)

2876. BARUCH.—The Dangers of Post Partum Injections. (*New York Med. Jour.*, Jan. 5.)

2877. OLIVER.—Non-gravid Hydrorrhœa. (*Brit. Med. Jour.*, May, p. 993.)

2878. GOODELL.—Coccygodynia. (*New York Med. Jour.*, March 15.)

2879. HART.—Iridin in the Treatment of Sickness in Early Pregnancy. (*Edin. Clin. and Path. Jour.*, Feb. 16.)

2880. SKLIFOSOVSKY, N. V., PROF.—On Thirty-five Cases of Ovariotomy. (*Vratch*, 1883, No. 6, pp. 81-3; No. 7, pp. 99-100; No. 8, pp. 114-5; and No. 9, pp. 132-4.)

2881. HOSHKEVITCH, M. J.—A rare Case of Vicarious Menstruation. (*Russkaia Meditz.*, 1884, No. 8, p. 187.)

2882. TRUZZI.—Fœtal Ascites; Hydramnios and Membranous Insertion of the Cord. (*Gazz. Med. Ital. Lomb.*, April 5, 1884.)

2883. TÉDENAT.—Laceration of the Cervix Uteri. (*Montpellier Médical*, 1883, p. 411.)

2884. VERNEUIL.—Amputation of the Cervix Uteri. (*Arch. Génér. de Méd.*, Jan. and Feb. 1884.)

2885. COHN.—The Prevention of Ophthalmia Neonatorum. (*Wiener Med. Blätt.*, March 13)

ART. 2874. *Fitzmaurice on Puerperal Eclampsia, treated by Chloral-Hydrate.*—Mr. N. F. H. Fitzmaurice, in the *Brit. Med. Jour.*, April 1884, p. 715, records the case of a lady who was delivered of a dead child, and four hours afterwards had a convulsion, followed very soon by another severe fit, lasting about seven minutes, with stupor for half an hour. About an hour after this a dose of fifteen grains of chloral-hydrate, with the same quantity of bromide of potassium, was given. Some urine was obtained and found to contain one-third albumen. There were two more convulsions about three hours after this dose, and Mr. Fitzmaurice then ordered fifteen grains of chloral every two hours. There were no more fits; the urine became abundant and free from albumen. The chloral was continued at longer intervals, and purgatives were ordered. The patient made a rapid recovery. The author notes that he is inclined to attribute to chloral-hydrate a valuable place in diminishing the amount of albumen in urine. It has frequently had good effect in cases of Bright's disease. [The above case is reported chiefly for the sake of drawing attention to the last sentence; the value of chloral being well established in cases of puerperal and other forms of eclampsia (*vide Medical Digest*, section 444 : 4). The use of the drug in Bright's disease is of comparatively recent date (*vide British Medical Journal*, Dec. 1882, p. 1,247, and Feb. 1883, pp. 235, 545.)—*Rep.*]

2875. *Cummins on the Cooling Bath in a Case of Puerperal Scarlatina with Hyperpyrexia.*—Dr. Cummins, in the *Brit. Med. Jour.*, April 1884, p. 760, reports the case of a lady, who, on the seventh day after a natural confinement, had a temperature of 103°, with a scarlatiniform eruption on the skin; on the tenth day the temperature had risen to over 106°, and the patient was in a prostrate condition. Dr. Cummins then stripped her and carried her to another bed, and applied towels, rung out in cold water, frequently to the whole body. This treatment was carried out for two hours, when the temperature had fallen below 103°. The patient was then put back to bed; the temperature soon fell to 100°, she had a refreshing sleep, and woke up able to take nourishment freely. The next night the temperature rose to 104°, notwithstanding the administration of quinine in five-grain doses; the hydrotherapeutic treatment was repeated, and, although it did not produce the marked effect noticed on the previous day, the temperature fell to 102°. After this, the patient slowly recovered.

2876. *Baruch on the Dangers of Post Partum Injections.*—Dr. Simon Baruch, in the *New York*

Med. Jour., Jan. 5, 1884, raises a plea against vaginal injections after normal labour, and states that simple cleanliness on the part of the physician and nurse, before, during, and after labour, is the best of all prophylactic antiseptics. In his own practice he reports 900 cases of labour, in which almost every known complication was encountered, treated without any prophylactic measures, other than strict cleanliness, with the result of only one death from a fever process.

2877. *Oliver on Non-gravid Hydrorrhœa.*—Dr. J. Oliver, in the *Brit. Med. Jour.*, May 1884, p. 993, writes that he has lately observed a case in which there was a discharge of fluid of a watery character from an unimpregnated uterus. The patients suffering from this affection are usually of a nervous temperament. The fluid discharged is somewhat milky, with a specific gravity of about 1003, alkaline, containing no albumen, but a fair amount of chlorides. The quantity discharged varies. As much as six ounces may be expelled at one gush, and may be as frequent as every four or six hours. The author suggests that the uterus itself is the medium of the discharge, and that the drainage occurring in this organ is comparable with that occurring in the kidneys during the secretion of the so-called hysterical urine. It is, therefore, probably dependent upon some derangement of innervation—whether through the vaso-motor nervous system, or directly through those nerves which are supposed to preside over secretion, the author can only conjecture. [In a lecture by Dr. Matthews Duncan, *Med. Times and Gazette*, Jan. 1884, p. 71, a vesico-uterine fistula was found to be the explanation of this condition in one case very similar to the above.—*Rep.*]

2878. *Goodell on Coccygodynia.*—In the *New York Med. Jour.*, March 15, 1884, it is stated that Dr. Goodell exhibited a carious coccyx which he had removed from a patient who had manifested all the symptoms of a very bad coccygodynia. Two cases are also referred to. One patient suffered from very severe coccygeal symptoms, for whom an operation was proposed; but as soon as the day and hour were fixed, all pain disappeared. Another very obstinate case, which had a traumatic history, had been long treated without success, but was unexpectedly cured by the excitement of a family jar.

2879. *Hart on Iridin in the Treatment of Sickness in Early Pregnancy.*—In the *Edinburgh Clin. and Path. Jour.*, Feb. 16, Dr. Berry Hart recommends the use of two grains of iridin in the form of a pill to be taken at night, and to be followed in the morning by a draught of Friedrichshall water, a teaspoonful of Carlsbad salts, or a doubly strong Seidlitz powder. He was led to the use of this remedy by Dr. Matthews Duncan's allusion to the probable influence of the liver in causing the vomiting of pregnancy. RICHARD NEALE, M.D.

2880. *Sklifosovsky on Thirty-five Cases of Ovariotomy.*—In the *Vratch*, Nos. 6, 7, 8, and 9, 1883, Professor N. V. Sklifosovsky, of Moscow, gives a detailed account of 35 cases of ovariotomy performed by him during the period between 1874 and 1883, thus completing his first half hundred of cases (the former 15 ovariotomies were performed by him in the period between 1865 and 1869). Of 35 patients 23 recovered, and 12 (34 $\frac{2}{7}$ per cent.) died; as in three of the cases death followed from cancer (2) and sarcoma (1) of the ovary, the true mortality may be recognised as 25$\frac{2}{7}$ per cent. Six patients died from septic, and 3 from purulent peritonitis. The first 3 cases of the series were conducted without antiseptic precautions; in the remaining 32 either Lister's dressing or iodoform was used. Of 35 patients, 24 were married and 11 single. In 28 cases the ovarian tumour presented extensive adhesions with the abdominal walls and various viscera. In 27 cases the ligatured pedicle was returned into the peritoneal cavity; in 8 cases Le Dran's operation was performed. In 27 cases the abdominal cavity was hermetically closed after the operation, and in 8 a large-sized draining-tube was introduced. Thirty times the operation was performed for multilocular cysts, 2 for single or unilocular cysts, and 3 for dermoid tumours. In 26 cases one ovary, and in 7 both of the organs were removed; two cases of Le Dran's operation the number of the ovaries removed remained unknown, on account of very extensive adhesions. Taking the whole number (50) of the cases operated by Professor Sklifosovsky we have 35 recoveries and 15 deaths (30 per cent.); or, excluding four deaths from malignant tumours, the mortality for the whole series is represented by 22 per cent.

2881. *Hoshkevitch on Vicarious Menstruation from the Nipples.*—In the *Russkaia Meditz*, No. 8, 1884, p. 187, Dr. M. J. Hoshkevitch, of Kherson, describes the case of a nervous, anæmic, weak, sterile married woman, aged 42, who began to menstruate at 17 years of age, suffered from metrorrhagia caused by an uterine polypus from 29 to 36, and in whom the catamenia ceased within a few months after the extraction of the polypus. After the cessation of the menses, three years ago, there began to occur a periodical slight hæmorrhage from the right nipple. The hæmorrhage, amounting to five to twenty drops daily, and lasting each time several days, returns quite regularly every month. It is entirely painless. The patient's breasts do not present anything anomalous. V. IDELSON, M.D.

2882. *Truzzi on Fœtal Ascites; Hydramnios and Membranous Insertion of the Cord.*—Truzzi reports (*Gazz. Med. Ital. Lomb.*, April 5, 1884) this interesting case occurring in the clinic of Professor Porro. The alterations found were membranous insertion of the umbilical cord, hydramnios, congestive hypermegalia of the liver and spleen, ascites and œdema of the great epiploon, cerebral œdema, serous infiltration of the subcutaneous cellular tissue of the head and thorax. Venous stasis in the fœtal placental circulation was clearly the cause of these alterations, and the stasis was due to membranous insertion of the cord, and the consequently long course, partly membranous, partly placental, of the ramifications of the umbilical vessels. Truzzi finds that osmosis through the walls of the parietal vessels takes place rapidly, and that not only for water and defibrinated ox-blood, as proved by Sallinger, but also for solutions of various salts (iodide of potassium, salicylate of soda, potassio-tartrate of iron, &c.); the prompt appearance of the salt being recognised by suitable reagents on the surface of the cord as well as on the fœtal aspect of the placenta, even when the pressure of the injection was very low. The investment formed by the amnios of the external surface of the cord and of the fœtal surface of the placenta retards, but does not prevent, the filtration of the saline solutions from the walls of the umbilical vessels. In some cases, however, especially if the pressure of the liquid were great, the osmotic effusion was so abundant from the placental venous ramifica-

tions that, all the liquid not being able to flow from the superficies of the amnios, it collected in great quantity in the areolar spaces between the amnios and chorion, dividing the two membranes and breaking up the trabeculæ of the endochorion, and forming there more or less extensive and communicating cystic collections. The osmotic flow is always more easy and abundant from the surface of the umbilical cord than from the fœtal surface of the placenta. This difference must be still greater in fœtal life; since in experiment the pressure of the liquid tends after a few moments to become equal in all the vascular territory injected, while during life the blood-pressure cannot certainly be equal where the blood overflows into the extensive capillary territory of the villi of the chorion, and where the blood-current is collected into the one narrow passage of the umbilical vein. The author wishes to prove that the anomalous insertion of the cord in the membranes is a factor in the embarrassment of the fœtal circulation, and, consequently, of increased venous transudation; that the coincidence of hydramnios, dropsy of the fœtus, and of the membranous insertion of the cord, is not merely fortuitous. Of course, membranous insertion of the cord does not necessarily mean the coincidence of ovular and fœtal dropsies; it is the *possibility* only to which he wishes to draw attention, that the fœto-placental circulation in some cases is carried on less easily in the vessels of the cord when spread over the membranes, and that this obstacle in the umbilical circulation may lead to hydramnios, hydrocephalus, ascites, sero-gelatinous infiltration of the fœtal tissues, and that by the simple exaggeration of these same conditions of serous exosmosis which are to-day invoked and recognised as the principal origin of the amniotic fluid. Of the other presumed causes of ovulo-fœtal dropsies, not one is constant; so that it is not rare, for example, to find the quantity of amniotic fluid normal, and no trace of dropsy of serous cavities in the fœtus; when syphilis exists, or torsion of the cord, or congenital malformation of the heart, or alteration of the liver, or any other of the many conditions which are considered causes of like anomalies of the ova and fœtus. Much importance must be conceded to the different length, of course, of the vessels of the cord in the membranes, to their direction and different disposition, which may differ much in various cases. Then there may be a dyscrasic element, represented by hydræmia of the mother, and, as sometimes happens, co-existing scanty development, and altered blood-crasis, of the fœtal organism.

G. D'ARCY ADAMS, M.D.

2883. *Tédenat on Laceration of the Cervix Uteri.*—According to the author (*Montpellier Médical*, 1883, p. 411) this accident is a frequent cause of subinvolution, metritis, and inflammation around the uterus, and the symptoms persist as long as the laceration has not been cured. The treatment consists in paring and uniting the edges of the lacerated tissues; in some cases, however, a cure may be effected by the repeated application of the actual cautery.

2884. *Verneuil on Amputation of the Cervix Uteri.* This operation has been performed nineteen times by the author (*Archiv. Gén. de Méd.*, Jan. and Feb. 1884) in cases of epithelioma, and he recommends it warmly to the profession, in spite of two deaths which might perhaps have been prevented. Even when the whole of the diseased tissues cannot be removed, good results may be obtained, as the patient is delivered, for a time at least, from the dangers of hæmorrhage and chronic septicæmia. The most favourable cases are those in which the vaginal cul-de-sacs are healthy, and the supra-vaginal portion of the cervix not increased in size. The operation is best performed by means of the ordinary or galvanic écraseur. Verneuil recommends thrusting a trocar through the cervix from behind forwards and passing two threads through the cannula; the wires are then tied to the threads and drawn through the cervix. After the operation the vagina must be carefully disinfected, and a carbolised compress must be placed on the vulva. A lukewarm antiseptic solution is then to be injected twice daily into the vagina.

J. S. KAESER, M.D.

2885. *Cohn on the Prevention of Ophthalmia Neonatorum.*—Prof. Cohn, of Breslau, has recommended a means of preventing ophthalmia neonatorum (*Wiener Med. Blätter*, March 13). This consists in washing out the vagina immediately before the birth with a solution of carbolic acid or corrosive sublimate, so that the child's head shall pass through a tract perfectly free from any infectious germs. He succeeded by this means in entirely preventing ophthalmia in the younger children of a family in which all the older ones had been affected.

ALICE KER, M.D.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

RECENT PAPERS.

2886. WARDEN, WADDELL, SALOMONSEN, AND NEISSER.—Jequirity-poisoning. The Non-bacillar Nature of Abrus-poison: Pamphlet. (Friedlander's *Fortschritte der Medicin*, Feb. 1, 1884.)

2887. TAMASSIA.—Atelectasis. (*Friedreich's Blätter für Gerichtl. Med.*, 1884, p. 223.)

2888. BUCHNER.—Chronic Lead Poisoning. (*Ibid.*, 1884, p. 161.)

2889. HIND.—Recovering after Swallowing Carbolic Acid. (*Lancet*, April, p. 659.)

2890. HALSTED. — Refusion in Carbonic Acid Poisoning. (*New York Med. Jour.*, Dec. 8, 1883.)

2891. BALDING.—Poisoning by Yew. (*Brit. Med. Jour.*, April, p. 818.)

2892. STADFELDT.—Toxic Action of Uterine Injection of Corrosive Sublimate. (*Wiener Med. Blätt.*, Feb. 28.)

2893. WERNER.—On Poisoning by Nitro-benzole; Successful Transfusion. (*Centralbl. für die Med. Wiss.*, No. 24, 1884.)

ART. 2886. *Warden, Waddell, Salomonsen, and Neisser on Abrus-poison.*—The non-bacterial nature of the poison of the now well-known jequirity-seeds has been asserted by Salomonsen of Copenhagen and Neisser of Breslau, and by Warden and Waddell of Calcutta, independently (Friedlander's *Fortschritte der Medicin*, Feb. 1, 1884; The Non-bacillar Nature of Abrus-poison, Calcutta, 1884). Warden and Waddell, indeed, assert that the toxic effects of the seeds are due to the presence of a proteid substance, to which they give the name *abrin*. The chief facts established by their experiments are these. 1. There is absence of bacilli or their spores in the seeds. 2. Unsterilised abrus infusion favours the growth of bacteria, but no special form of bacillus was found constantly in all the specimens, and all the bacilli

and cocci found were innocent. 3. The local action of unsterilised infusion is usually accompanied by bacterial formation; but the bacteria found are of various kinds, and non-pathogenous. They enter the wound (1) in the injected fluid, or (2) from the syringe during the process of injection, or (3) afterwards, when the reduced vitality of the part allows the degenerated tissue to become invaded by bacteria from the air. 4. The intensity of the topical application of infusion of abrus-seed, like that of other chemical irritants, depends upon the concentration and number of applications. 5. The characteristic lesions are a profound alteration in the organised elements of the blood, and the occurrence of generalised minute hæmorrhages into the substance of most of the highly vascular tissues and viscera. The hæmorrhages appear to occur by diapedesis, without rupture of the capillary walls. 6. With large doses, death occurs too rapidly to be attributable to bacterial invasion; and direct examination shows the complete absence of bacteria, both in the blood and at the seat of the hæmorrhagic extravasations. 7. When bacilli are found in the blood, their presence is purely accidental, and they are non-pathogenous and non-specific. 8. The blood of an animal killed by abrus-poison is not infective. 9. Varying doses produce definite effects, proportionate to the largeness of the dose, in the same manner as any other chemical poison. 10. Exposure to a temperature of 60° C., a temperature too low to destroy bacteria, destroys the activity of the poison. 11. One small dose of the poison confers no immunity against further inoculation. The *abrin* separated by Warden and Waddell was evidently an impure substance, and yielded a high percentage of ash. They are inclined to regard it as akin to snake-poison. When introduced into the system by inoculation, it acts like an infusion of abrus-seeds. Abrin is contained, also, in the roots and stems of the plant, as well as in the seeds. The treatment recommended is similar to that for snake-bites, viz., excision of the inoculated part, antiseptic treatment of the wound, and the administration of iron.

2887. *Tamassia on Atelectasis.*—Professor Aurigo Tammasia (*Friedreich's Blätter für Gerichtl. Med.*, 1884, p. 223) has investigated Schröder's theory that the fœtal lung, after inflation, occasionally reverts to an atelectatic condition; and arrives at the conclusion that this reversion does not take place.

2888. *Buchner on Chronic Lead Poisoning.*—Dr. L. A. Buchner (*Friedreich's Blätter für Gerichtl. Med.*, 1884, p. 161) gives the instructive details of the history of a family poisoned by lead, accidentally introduced into flour by the use of white lead in the repairing of the mill. Two specimens of the flour yielded 0·086 and 0·077 per cent. metallic lead, quantities equivalent to 7½ grains and 6¾ grains respectively per pound of flour.

THOMAS STEVENSON, M.D.

2889. *Hind on a Case of Recovery after Swallowing Carbolic Acid.*—Mr. Hind, in the *Lancet*, April 1884, p. 659, records the case of a girl, aged 17, who took nearly six ounces of crude carbolic acid, containing 14 per cent., and drank it off at one draught, in mistake for an aperient medicine. The author was sent for about fifteen minutes after the occurrence, and made the patient swallow the whites of fifteen eggs, mixed with more than a gallon of well-warmed sweetened milk. This soon caused vomiting; the patient being much relieved. Two or three days afterwards there was much redness and swelling of the fauces, and the urine was deeply tinged with carbolic acid. The quantity of fluid administered to the patient was as large as possible, the stomach being thus distended, so that it vomited its contents and relieved itself of the poison. The patient made a good recovery.

2890. *Halsted on Refusion in Carbonic Oxide Poisoning.*—Dr. Halsted, in the *New York Med. Jour.*, Dec. 8, 1883, discusses the method of treating cases of carbonic oxide poisoning by refusion. The practice consists in removing a quantity of the vitiated blood, and, after defibrination and oxidation, restoring it to the circulation. The blood is introduced by centripetal arterial injection, because by this method blood courses more slowly and equally to the heart; the minutest air-bubble is retained in the capillaries, and the danger of phlebitis is avoided; moreover, arterial blood is thus most directly dispatched to the nerve-centres, and the filling of the arterial system improves the circulation by creating a greater difference between the pressures in the two systems.

2891. *Balding on Fatal Poisoning by Yew.*—In the *Brit. Med. Jour.*, April 1884, p. 818, Mr. D. B. Balding relates, in a paper read before the Cambridge Medical Society, the case of a servant girl, aged 24, who complained one day to her mistress of having a headache; she, however, did her work, and was last seen at 8 P.M. The next morning she was found dead in her bed, lying on her face, and quite cold. From external evidence, it was seen that the deceased was pregnant, and no signs of violence, or vomited matter was detected. *Post mortem* examination showed all the organs to be healthy, except that the mucous membrane of the stomach was inflamed. It was then ascertained that the deceased had picked some twigs from a yew-tree in the garden, and had eaten them. Death seems to have taken place in this case within nine hours. Children often eat yew-berries with impunity, but horses and cattle have been known to die from eating yew. It is not clear in what part of the tree the poisonous principle resides. [Several instructive cases of poisoning from eating the seeds, leaves, and berries of the yew are noted in the *Medical Digest*, sect. 358 : 7.—*Rep.*]

RICHARD NEALE, M.D.

2892. *Stadfeldt on the Toxic Action of Uterine Injection of Corrosive Sublimate.*—The *Wiener Med. Blätt.* of Feb. 28 reports a case of death after the employment of a solution of corrosive sublimate for washing out the uterus, which case had been communicated to the *Centralbl. für Gynäk.* by Dr. Stadfeldt, of Copenhagen. The patient was an unmarried primipara, who had always enjoyed good health, and who was naturally delivered of a child an hour and a half after admission to the institution. The placenta was adherent, causing considerable loss of blood, but no great subsequent anæmia. The genitalia were irrigated at first with carbolic solution, and on the sixth day with the customary solution (1 in 1,500) of corrosive sublimate. A sudden pain in the head, with feeling of suffocation, obliged the irrigation to be stopped before half the usual quantity had been used (the liquid flowed freely back again out of the uterus); and death occurred five days later, the chief symptoms having been pain in the head and abdomen, a feeling of great exhaustion, and diarrhœa. The tongue was tender, without salivation, and there was some ulceration on its under surface. A considerable amount of albumen was found in the urine. The

pelvic organs were found at the necropsy to be quite normal, but both kidneys were large and pale, the cortex being swollen and opaque, and sharply defined against the pyramids. Some ulceration was present in the large intestine, and hyperæmia of the mucous membrane in the small. Dr. Stadfeldt expresses his conviction that the death was undoubtedly the result of sublimate poisoning, but the *Wiener Med. Blätter* considers the appearances insufficient to say so with absolute certainty.

ALICE KER, M.D.

2893. *Werner on Poisoning by Nitro-benzole.*—A woman, aged 30, swallowed about thirty grammes (nearly one ounce) of nitro-benzole. Vomiting soon set in, and the breath smelt of bitter almonds. After a few hours, a peculiar blue-grey coloration of the skin and lips was observed; somnolence then followed. Only a partial return to consciousness followed the use of the stomach-pump, camphorine injections, and enemata of brandy; finally coma set in. The respiration was superficial and quickened; the pulse, at first full and rapid, became gradually weaker, and at last could scarcely be felt. There was no marked disturbance of the reflex excitability; even during the coma the patient reacted to strong irritation of the skin by slight movements. Thirteen hours after taking the poison, deep coma having existed for several hours, about seventeen ounces of very black blood, smelling distinctly of bitter almonds, were withdrawn, and about twelve ounces of warm defibrinated human blood were then transfused. Temporary improvement ensued, soon followed by relapse. But the patient rallied again, and ten hours after the transfusion the patient, now quite conscious, was free from pain, and asked for food. She rapidly recovered, but the discoloration of the skin and the peculiar odour of the breath persisted till the fifth day. The author accordingly recommends an early venesection and transfusion to a large amount in severe cases of the above poisoning.

E. J. EDWARDES, M.D.

PATHOLOGY.

RECENT PAPERS.

2894. KIDD.—Unusual Cases of Pulmonary Aneurism. (*Brit. Med. Jour.*, May, p. 997.)

2895. PARK.—A Case of Large Tumour Enveloping the Heart. (*Lancet*, May, p. 890.)

2896. RICHARDSON.—Use of Peroxide of Hydrogen for the Diagnosis of Pus and Mucus. (*Asclepiad*, April, p. 161.)

2897. RICHARDSON.—Temporary Preservation of *Post Mortem* Specimens. (*Ibid.*, April, p. 156.)

2898. DULLES.—Hypertrophied Hearts. (*New York Med. Jour.*, Dec. 29, 1883.)

2899. CAYLEY and GIBBES.—Ulcerative Endocarditis. (*Brit. Med. Jour.*, May, p. 856.)

2900. BRISCOE.—A Case of Complete Obliteration of the Pericardial Cavity. (*Lancet*, May, p. 889.)

2901. STETZENKO, PETR.—On the Morbid Anatomy of the Parotid and Submaxillary Glands in Chronic Constitutional Diseases. (*St. Petersburg Inaugural Dissertation*, 1884.)

2902. SMIRNOFF, P.—A Contribution to the Study of Changes in the Kidney in Various Forms of its Atrophy. (*St. Petersburg Inaugural Dissertation*, 1883.)

2903. DIATCHENKO, NIKOLAI.—Changes in the Lymphatic Vessels of the Intestinal and Mesenteric Serous Coat in Tuberculosis. (*St. Petersburg Inaugural Dissertation*, 1883.)

2904. PREIS, N. P.—Professional Lipoma of Prostitutes. (*Russkaia Meditzina*, 1884, No. 13, pp. 294-6.)

2905. SCHILL AND FISCHER.—On the Disinfection of the Sputum in Phthisis. (*Centralbl. für die Klin. Med.*, No. 24, 1884.)

2906. JACOBI.—Congenital Lipoma. (*Archives of Pediatrics*, Vol. i., No. 2.)

2907. Septicæmia in a Child from Puerperal Infection. (*Allgem. Wien. Med. Zeitung*, April 22.)

ART. 2894. *Kidd on Unusual Cases of Pulmonary Aneurism.*—In the *Brit. Med. Jour.*, May 1884, p. 997, a report is given of four specimens shown by Dr. Kidd at the Pathological Society. Case 1 was that of a woman aged 30, who died of hæmoptysis, and in whom twenty-two aneurisms of the pulmonary artery were found. Case 2 was one of acute phthisis in a woman aged 26. The left lung was universally adherent. Two aneurisms, one as large as a pea, the other of the size of a small bean, were found in an irregular basic cavity, with soft caseating walls, evidently of acute formation. Case 3 occurred in a woman aged 26. Trabeculated excavation of the entire left lung had occurred. Three unruptured aneurisms were found, one at the apex, two at the base. Case 4 was that of a man aged 28, who died of hæmoptysis. In a cavity at the base of the left lung was a ruptured fusiform aneurism. In 230 cases of phthisis, examined after death by Dr. Kidd, he had found aneurisms of the pulmonary artery in twenty-six. In seventeen cases, rupture of an aneurism had occurred.

2895. *Park on a Case of Large Tumour Enveloping the Heart.*—Dr. Park, in the *Lancet*, May 1884, p. 890, reports the case of a girl aged 7, who suffered from a large tumour within the thorax. The protuberance looked like an aneurismal swelling, but there was no bruit. Severe angina pectoris and attacks of dyspnœa gradually exhausted the child. *Post mortem*, there was revealed a large tumour under the sternum. A vertical incision into its substance for two inches brought the heart into view, and it was completely encased by the growth. The large vessels from the heart ran through the mass, and were diminished in size from the pressure. The tumour was yellowish, of a firm consistence; and although it ran some distance down the spine, its origin was difficult to trace. It probably originated in the thymus gland. The microscope showed the growth to be a round-celled sarcoma. Its size was about that of a small child's head. All the other organs were healthy.

2896. *Richardson on the Use of Peroxide of Hydrogen for the Diagnosis of Pus from Mucus.*—In the *Asclepiad*, April 1884, p. 161, Dr. B. W. Richardson states that mucus, brought into contact with a solution of peroxide of hydrogen, does not affect the solution in the least, if the mucus be free from carbon-dioxide; but the smallest amount of purulent matter at once liberates the oxygen freely. Albumen does not affect the solution. Fibrin immediately sets free the oxygen. Blood-corpuscles, under some circumstances, do set free the oxygen; at other times this is not the case, the probabilities being that the red corpuscles do not, and the white do, so act. Ordinary fibrous tissue does not set free the oxygen; cellular tissue liberates it with violence. To apply these observations to the detection of pus in excretions, it is necessary to place four drachms of the

solution of the peroxide, of ten volumes strength, in a test-tube, and add the suspected fluid. If there be escape of gas, it is fair to assume that pus is present. If gas do not escape, the fact that pus is not present may be accepted as certain.

2897. *Richardson on the Temporary Preservation of Post Mortem Specimens.*—In the *Asclepiad*, April 1884, p. 156, an effective plan is described for preserving specimens from *post mortem* examinations. Take a large, wide-mouthed, glass-stoppered bottle; have the cork well greased and fitting tightly. Next fill the bottle with common coal-gas, and quickly pour a drachm of ammoniated chloroform into the bottle; then tie down the stopper. The preserving bottle is now ready to take to the *post mortem* chamber. The organ or part which has to be preserved must be placed in a fold of soft muslin, and gently pressed, so as to remove as much fluid as is possible without injury to structure. The specimen is then dropped quickly into the bottle, and the cork tied tightly down. By keeping the bottle in a cold place, the specimen will remain good for days or even weeks.

2898. *Dulles on Hypertrophied Heart.*—The *New York Medical Journal*, Dec. 29, 1883, contains an account of a specimen of the heart of a rheumatic patient, aged 18, shown to the Pathological Society of Philadelphia on Dec. 13, 1883, by Dr. Dulles. The heart weighed 40 ounces, when emptied of blood-clot and well washed. The pericardium was adherent everywhere. All the valves and blood-vessels were healthy, although the mitral orifice measured two and a half inches in diameter. The kidneys were in a condition of 'cyanotic hypertrophy.' Recently at meetings of the New York Pathological Society similar specimens were exhibited, weighing respectively 55 and 57 ounces. [Among the cases recorded in the *Medical Digest*, sect. 769: 6, none have exceeded 54 ounces.—*Rep.*]

2899. *Cayley and Gibbes on Ulcerative Endocarditis.*—In the *Brit. Med. Jour.*, May 1884, p. 856, a note is given on Dr. Cayley's paper on a case of ulcerative endocarditis, read before the Medical Society of London on April 28, and also a reference to the microscopical specimens exhibited by Dr. Heneage Gibbes. These were: 1. micrococci in lymph from the inflamed endocardium; 2, micrococci in diphtheritic membrane; 3, vessel in the liver blocked with micrococci; 4, inflammatory area in the skin, showing small masses of micrococci; 5, blood-vessel in the spleen crowded with micrococci. Dr. Cayley, in the discussion which followed, thought the term ulcerative endocarditis objectionable, and preferred the term infective pericarditis, or even the German term, diphtheritic endocarditis.

2900. *Briscoe on a Case of Loss and Complete Obliteration of the Pericardial Cavity.*—Mr. J. F. Briscoe, in the *Lancet*, May 1884, p. 889, gives the notes of a girl, aged 12, who was admitted into the Royal Hospital for Women and Children, evidently suffering from some heart-affection. There was no history of rheumatic fever. The child had ailed for about five weeks, having a slight cough, with pain in the left precordial region. On examination, a mitral bruit was heard, and possibly aortic also; subcrepitant râles were audible at both bases; the lips were blue, the urine dark, but free from albumen. Digitalis was given, with stimulants, but to no effect, the child dying three days after its admission. On *post mortem* examination, it was found that the pericardial cavity was completely obliterated, the parietal and visceral layers of the pericardium being fused together. The heart was hypertrophied, delicate vegetations being attached to the three nodules of the aortic valves, and a fringe of similar growths round the mitral valve. All the other organs were fairly healthy. Richard Neale, M.D.

2901. *Stetzenko on Morbid Changes in the Parotid and Submaxillary Glands in Chronic Constitutional Diseases.*—Dr. Petr Stetzenko, of Professor N. P. Ivanovsky's laboratory, has microscopically examined (*St. Petersburg Inaugural Dissertation*, 1884) the parotid and submaxillary glands from twelve cases of various chronic diseases; namely, from five cases of pulmonary phthisis, one of diabetes, one of nephritis complicated with cancer of the stomach, one of cancer of the neck with hypostatic pneumonia, one of mammary cancer, one of cirrhosis of the liver, and one of cardiac valvular affection with nephritis. The outcome of his investigations is as follows. 1. In the course of chronic constitutional disease the acinary epithelial cells of the salivary glands undergo parenchymatous inflammation—that is, atrophy and albuminous and fatty degeneration, the degree of which is proportionate to intensity and duration of constitutional disease. 2. As constantly there simultaneously occurs a chronic interstitial process, which is now circumscribed and then diffuse, and which is always accompanied by infiltration with lymphoid elements; the infiltration, however, rarely reaching any high degree. 3. An increased growth of connective tissue is observed, mainly around the glandular blood-vessels, which often undergo obliteration. 4. In nearly all cases there is found a certain amount of fatty infiltration in the interstitial connective tissue of the glands. 5. The ducts not unfrequently present catarrhal changes. Their epithelial covering shows a tendency to parenchymatous degeneration, the latter often reaching a considerable degree. 6. Gianuzzi's half-moons present less marked parenchymatous alterations than the cells which have lost their mucus. 7. The mucous acini generally remain, but in a scanty number. Sometimes they are transformed into mucous cysts. 8. There are frequently met little masses of a brown pigment, and, in rare cases, granules of melanin. The author never saw amyloid degeneration of the salivary gland, or formation of salivary calculi.

2902. *Smirnoff on Atrophy of the Kidney.*—Dr. P. Smirnoff (*St. Petersburg Inaugural Dissertation*, 1884), under the guidance of Prof. N. P. Ivanovsky, examined kidneys in eleven cases of atrophy of various kinds (from one case of congenital atrophy of the kidney, four cases of atrophy from mechanical causes, as renal stone, compression or obliteration of the ureter, three of senile atrophy without any inflammatory phenomena, three of atrophy of inflammatory character). The results at which he has arrived are these. 1. Atrophic kidneys have not any identical histological structure. 2. In atrophic Brightic kidney, where there is present interstitial or diffuse nephritis, the blood-vessels are affected with obliterative endarteritis, while in senile and congenital atrophy, as well as in cases of hydronephrosis and renal stone, the endarteritis is absent. 3. In senile atrophy the main vascular changes consist in hyperplasia of the adventitia (periarteritis) and in fibrosis (or 'connective-tissue degeneration') of the muscular coat. In cases of Bright's disease in old people, there are simultaneously present both

obliterative endarteritis and periarteritis, with fibrosis of the muscular coat of the vessels. 4. Senile atrophic kidney differs from Bright's atrophic kidney, also, by the presence of alterations in the central and Malpighian tufts (simple and fatty degeneration). 5. In all forms of renal atrophy (except senile) the muscular coat of the arteries usually undergoes, in the beginning, hypertrophy, and afterwards atrophy.

2903. *Diatchenko on Changes in the Lymphatic Vessels of the Intestinal and Mesenteric Serous Layer in Tuberculosis.*—From his microscopic researches carried out at Professor N. P. Ivanovsky's laboratory, Dr. Nikolai Diatchenko (*St. Petersburg Inaugural Dissertation*, 1883) draws the following conclusions. 1. Lymphatic vessels present one of the sites for the development of tubercles. 2. Tubercles in this situation are developed mainly, if not exclusively, from the epithelioid cells (the author never saw any distinct transformation of leucocytes into epithelioid and multinuclear cells). 3. The lymphatic vessels which have served as a starting point for the development of tubercles usually incite the same process in the surrounding tissues. 4. Hyaline degeneration is the most often degenerative process in tubercles of the lymphatic vessels. 5. Koch's rods present a necessary ingredient of the tubercle. The bacilli are found in recently formed tubercles, where they are present both within the cells (especially within giant-cells) and between them. They are absent in caseous and hyaline masses.

2904. *Preis on the Professional Lipoma of Prostitutes.*—In the *Russkaia Meditzina*, No. 13, 1884, p. 294, Dr. N. P. Preis, of Charkov Hospital for Venereal Women, ascribes what he calls 'lipoma diffuso-circumscriptum professionale,' to the existence of which in prostitutes his attention was first drawn by Dr. V. J. Porai-Koshitz, of Charkov. The tumour is present in 145 of 217 (in 67 per cent. of) prostitutes living in Charkov brothels, and is invariably situated in the region of the sixth and seventh cervical vertebræ, its growth always starting from the spot exactly over the spinous process of the vertebra prominens. Its size varies between that of a nut and a large apple, the diameter of its base varying from 2 to 10 or 12 centimètres. Its shape is hemispherical or semi-oval, with a flattening in the middle. The surface is smooth, the skin tense, adherent, sometimes pigmented, but otherwise normal. On palpation, the tumour is somewhat firmish, elastic, movable, painless. Its development begins soon after the patient has entered the profession of a prostitute, and, as several carefully observed cases show, proceeds pretty rapidly. Dr. Preis thinks (1) that this tumour is a lipoma resulting from hyperplasia and hypertrophy of the fatty tissue normally present in the situation specified above; (2) that its development is caused by a local mechanical irritation. The latter is given in the form of pressure to which the spinous process of the seventh cervical vertebra is especially subjected during coition, when the woman lies on her back with her head flexed, so that the upper part of the back and posterior and lower part of the neck form an angle, the apex of which is the seventh cervical spinous process. In all movements of the pelvis and limbs during the sexual act, the body's weight rests on this region. Hence, tall and well-nourished prostitutes are inclined to the development of professional lipoma in a higher degree than short and meagre women. Neither the author nor Drs. Porai-Koshitz and Bellin were able to detect this tumour in non-prostitutes. Syphilis seems to have no connection with the development of the new growth, since of 145 prostitutes possessing the lipoma 75 never had any venereal disease.

V. IDELSON, M.D.

2905. *Schill and Fischer on Disinfection of the Sputum in Phthisis.*—According to Koch (*Centrabl. für die Klin. Med.*, No. 24, 1884), the dried sputum of tuberculous patients imparted tuberculosis to guinea-pigs after preservation up to three months. After five months the inoculation sometimes failed, and after eight months there were no results. The authors made experiments on the disinfection of fluid sputum from phthisical patients, using the inoculation into guinea-pigs as a means of control over their results, which were as follows. 1. Decomposition for many weeks did not deprive the sputum of its specific virulent properties. 2. Steam passed over dried sputum sterilised it in from half an hour to an hour. For fluid sputum fifteen minutes sufficed, and hence the application of steam may be recommended. 3. Perchloride of mercury solution (1 to 1,000, or even 1 to 500) failed altogether. 4. Absolute alcohol (5 parts to 1 of sputum) was not absolutely certain in its sterilising effects. 5. Carbolic acid (5 parts of a 2½ per cent. solution to 1 part of sputum) was without effect, but was efficient in a 5 per cent. solution. 6. Saturated aniline water required to be added in tenfold quantity to sterilise the sputum.

E. J. EDWARDES, M.D.

2906. *Jacobi on Congenital Lipoma.*—Professor Jacobi, of New York, contributes to the *Archives of Pediatrics*, Vol. i., No. 2, notes of four cases of this condition, and a summary of the literature of the subject. The first case was that of a girl, aged 3, in whom a swelling was noticed in the lumbar region at birth. It grew slowly up to six months before admission, and then increased very rapidly until it measured 10 inches by 4. The tumour was removed with antiseptic precautions, but the child died a few months afterwards. In addition to the large lipoma, there were two smaller ones, one in the gluteal region, and one near the scapula. The second case occurred in a boy 3 years of age. The swelling had been observed for two years, and was seated in the left groin. It measured about 3½ by 2½ inches. Operation was objected to. The third case occurred in a man 55 years of age, but was believed to date from birth. Its position was over the ninth and tenth dorsal vertebræ. The fourth case is the most interesting. It occurred in a female child, who weighed 13½ lbs. at birth. On the right thigh, a large soft lobulated tumour nearly surrounded the limb. 'The left foot is very large, its third and fourth toes are webbed and thrice their natural size. The left lumbo-dorsal region is swelled, soft, and adipose. The whole right side of the body up to the axilla is occupied by a diffuse, somewhat nodular mass, the surface of which shows a few hæmorrhagic spots, but no dilated vessels, except at one spot about 14 centimètres square, where the colour is brown and fades on pressure.' Later, the left side of the head grew more than the right. The child died when a few months old, and the necropsy confirmed the diagnosis. The fifth case was one of lipoma of the lumbar region, complicated with spina bifida, and has been already published.

RALPH W. LEFTWICH, M.D.

2907. *Septicæmia in a Child from Puerperal Infection.*—The *Allgem. Wien. Med. Zeit.* of April 20 contains the clinical history and necropsy of a child 5 days old, who died of septicæmia induced by puerperal infection from the mother. The labour had been protracted, the breech presenting, and there was a history of fæcal vomiting for three days. The colour of the skin was a dirty greyish yellow, and the child entered the hospital in a state of collapse, with sunken eyes and depressed fontanelles. Several bloody stools were passed after admission, and death supervened in a condition of coma. Capillary apoplexies were found in the brain and in the choroid plexus, hæmorrhagic patches in the mucous membrane of the stomach, and large hæmorrhagic patches in the kidneys. The intestines were in a state of extreme contraction, the small intestine being scarcely as thick as a crow-quill, and the large about the thickness of an ordinary pen-handle.

ALICE KER, M.D.

SYPHILOGRAPHY.

RECENT PAPERS.

2908. CHAMBARD.—A Case of Tertiary Syphilis. (*Annales de Derm. et de Syph.*, No. 1, 1884.)

2909. JULLIEN.—A few Words on Hypodermic Injections of Calomel in the Treatment of Syphilis. (*Ibid.*, No. 2.)

2910. DIDAY.—On Dualism in Syphilography. (*Ibid.*, Nos. 2 and 3, 1884.)

2911. SCHUSTER.—On the Elimination of Mercury during and after its Cutaneous Employment. (*Journal of Cutaneous and Venereal Diseases*, Vol. i., No. 12.)

2912. MARTINETTI.—Another Case of Syphilitic Sclerosis of the Lower Segment of the Uterus as a Cause of Dystocia, &c. (*Annali di Ostetricia, Ginecologia, e Pediatria*, No. 1, p. 89, 1884.)

2913. PELLIZZARI, CELSO.—Gummata of the Tongue Forty-three Years after Infection. (*Giornale Ital. delle Mal. Ven. e della Pelle*, Fasc. i., 1884.)

2914. MORISANI.—New Contribution to the Study of Experimental Syphilis. (*Il Morgagni*, No. 2, 1884.)

2915. KAMMERER.—On Gonorrhœal Inflammation of the Joints. (*Centralbl. für Chirurgie*, No. 4, 1884.)

2916. NEPVEU.—On some Rare Varieties of Syphilitic Ulcer of the Legs. (*Revue de Chirurgie*, No. 3, 1884.)

2917. LE GENDRE.—The Diagnosis of Syphilitic Chancre of the Tonsil. (*Arch. Gén. de Méd.*, January and March, 1884.)

2918. DUJARDIN-BEAUMETZ.—The Treatment of Syphilis. (*Philadelphia Medical News*, Feb. 2, 1884.)

2919. KEYES.—Experiments with recently recommended Remedies in Gonorrhœa. (*Jour. of Cutaneous and Venereal Diseases*, March 1884.)

2920. DIDAY.—On Local Antiparasitic Treatment of Gonorrhœa. (*Lyon Médical*, No. 9, 1884.)

2921. WOOD, HORATIO C.—Clinical Aspects of Cerebral Syphilis. (*Philadelphia Medical Times*, March 8 and March 22, 1884.)

2922. MCVAIL.—The Treatment of Gonorrhœa by open Wire Bougies. (*Brit. Med. Jour.*, March 15, 1884.)

2923. HUTCHINSON.—A Case of Syphilis in which the Fingers of one Hand became Cold and Livid: Suspected Arteritis. (*Medical Times and Gazette*, March 15, 1884.)

2924. WEBER.—Locomotor Ataxy and Syphilis. (*New York Med. Jour.*, March 29, 1884.)

2925. LANGE.—Specific Myositis of the Gastrocnemius. (*Ibid.*)

2926. PORTER.—Syphilitic Paraplegia. (*Brit. Med. Jour.*, April 12, 1884.)

2927. THORPE.—Indurated Sore on the Outer Side of the Left Eyebrow. (*Ibid.*)

2928. RAMONAT.—On Syphilis in Scrofulous Patients. (*Thèse de Paris*, and *Revue des Sciences Méd.*, April 1884.)

2929. BLACKWOOD.—Can a Man affected with Syphilis communicate the Disease to a Healthy Fœtus without Infecting its Mother?—Can a Man beget a Syphilitic Child without Infecting its Mother? (*Philadelphia Medical Times*, April 19, 1884.)

2930. HUTCHINSON, JONATHAN.—Diseases of the Nervous System of Syphilitic Origin. (*Medical Press and Circular*, April 23 and April 30, 1884.)

2931. PUTZEL.—Syphilis of the Central Nervous System. (*New York Med. Record*, April 26, 1884.)

2932. ROCHE.—Syphilis and Mercury. (*Lancet*, May 10, 1884.)

2933. MIVART.—Hypertrophy of Bone due to Congenital Syphilis. (*Ibid.*, May 17, 1884.)

2934. TAYLOR, R. W.—Chancre of the Tonsil. (*New York Med. Jour.*, May 24, 1884.)

2935. VOLSKY, V.—On the Course of Syphilis under the Influence of Acute Febrile Diseases. (*Russkaia Meditzina*, No. 15, 1884, pp. 346-7.)

2936. CURNOW.—Syphilis and Aphasia: Gummata in the Cerebral Cortex. (*Med. Times and Gazette*, April, p. 491.)

ART. 2911. *Schuster on the Elimination of Mercury during and after its Cutaneous Employment.*—In a reprint from the *Jour. of Cutaneous and Venereal Diseases*, vol. i. No. 12, Dr. Schuster, of Aix-la-Chapelle, gives the results of more than 100 examinations respecting the elimination of mercury in syphilitic patients who were either still under treatment by mercurial inunction, or who had been thus treated for a time varying from one to twelve years. At first, only the urine was tested, by the Ludwig-Fürbringer method, modified by Schridde. Mercury was thus found often in small, but rarely in large, quantity, during and some weeks after the mercurial treatment. Frequently, however, mercury was not found in the urine. Dr. Schuster, therefore, proceeded to examine the fæces, and found that mercury was always present in them. The result of forty examinations of the fæces was that mercury was found regularly in relatively large quantity during mercurial inunction. The earliest examination was made ten days after the beginning of treatment. Mercury was found in the fæces for five and a half months after the end of the course, the examination being made at intervals of from ten to fourteen days. Mercury was found in the fæces in all cases in which it was found in the urine; but it was frequently absent from the urine when it was found in the fæces. From this Dr. Schuster draws the following conclusions. 1. The elimination of mercury by the fæces is regular and continuous. 2. The elimination of mercury introduced by a course of inunction of from thirty to forty-five days is completed in six months. 3. Persistence of mercury in the organism does not occur.

2912. *Martinetti on Syphilitic Sclerosis of the Lower Segment of the Uterus as a Cause of Difficult Labour.*—Dr. Martinetti, of Florence, relates in the *Annali di Ostetricia, Ginecologia, e Pediatria*, No. 1, 1884, some particulars of a case which was under the care of Professor Chiara. The patient, aged 17, was admitted into the Maternity Hospital of Florence, in labour, on Dec. 10, 1883. She was suffering from a papular syphilide and mucous patches of the genital organs. The vagina was soft

and dilatable. The lips of the os uteri were agglutinated by a mass of epithelium. The lower segment of the uterus was of cartilaginous hardness. The obstruction of the os was overcome by dilatation with the finger by Professor Chiara; but the hard cervix offered an hour's further resistance, at the end of which time the anterior lip suddenly split, and the labour afterwards ended naturally. The remainder of Dr. Martinetti's paper relates to an attack of scarlatina from which the patient subsequently suffered. The author refers to another and similar case of induration of the cervix (published by him in the preceding number of the same journal), which, he thinks, was probably of syphilitic origin. He appears to base his opinion of the syphilitic nature of the induration of the uterus in both cases on some remarks by Fournier in his lectures on 'Syphilis chez la Femme.'

2913. *Pellizzari on Gummata of the Tongue.*—Particulars of a case of this kind were read by Dr. Celso Pellizzari before the Medical Society of Siena (*Giornale Ital. delle Mal. Ven. e della Pelle*, Fasc. I., 1884). The patient was a man, aged 65, who, in 1840 (forty-three years before he came under observation) had had a sore on the penis, followed by pains in the head and bones, a rash on the skin, and moist patches in the mouth. He was treated with iodine and mercury for about a month. He married in 1855, and became the father of four healthy children. He had always enjoyed good health until a month before he came to Dr. Pellizzari (November 1883) when he noticed a nodule in the left anterior half of his tongue. Other nodules afterwards appeared, and these subsequently became fused into one elongated swelling. At the same time, two other nodules appeared in the dorsum linguæ. The lumps were hard at first, but gradually softened and ulcerated. On examination of the man, who appeared vigorous and healthy, the apex of the tongue was found to be indurated, and there were two scooped-out ulcers on the upper surface. On the left side of the tongue there was a third ulcer. There was no glandular enlargement. Small doses of perchloride of mercury and iodide of sodium were prescribed three times daily. In a week the ulcers were half healed, and the infiltration of the tip had greatly diminished. After a month's treatment the patient wrote to say he was well.

2915. *Kammerer on Gonorrhœal Arthritis.*—The following cases occurred in the clinic of Professor Kraske of Freiburg, and are reported by Dr. Kammerer in the *Centralbl. für Chirurg.*, No. 4, 1884. *Case* 1.—A man, aged 32, had so severe an injury to his left leg on September 5, 1883, that amputation was considered necessary, and was performed through the thigh by Carden's method on Sept. 6. The wound did not unite by first intention; there was a rise of temperature, and part of the flap sloughed. On Sept. 10 the man complained of pain in the right knee, which was very tender on manipulation, and there was slight effusion into the joint. Next day the pain and effusion had increased, and a splint was applied. As it was now thought that the arthritis might be gonorrhœal, the urethra was examined, and the meatus found to be red, but there was no visible discharge. The patient said he had had a gonorrhœa. The pain and swelling of the joint went on increasing, and, as the evening temperature was 39°·5 C. (103° F.) the joint was punctured with antiseptic precautions and some purulent nonbloody fluid removed. Microscopical examination of the fluid showed the presence in it of micrococci, in every respect like those described by Neisser as peculiar to gonorrhœa under the name of 'gonococci.' Their number was small; at most only three or four groups of two each in the field at one time. The following day there was a discharge from the urethra, and examination of this showed the same kind of organisms in larger quantity. The temperature now soon fell, and everything, including the amputation wound, went on well till Sept. 23, when the temperature again rose to 103° F., and on the following evening the same rise occurred. Examination of the knee-joint revealed effusion, especially at the upper part of the synovial cavity. On the 27th, the evening temperature was 104°. On the 28th, an incision was made into the upper part of the joint on each side of the rectus tendon. The joint was then washed out, and drained, and dressed antiseptically. The fluid was more purulent than before, but no micro-organisms were detected in it. The patient finally recovered with a slightly movable joint. Case 2, a woman, aged 22, came under observation on Sept. 22, 1883, with pain and moderate effusion in the right knee-joint, which she attributed to a blow received a week previously. After two days' rest and bandaging the pain was much worse, and the joint was distended with fluid. The other joints as well as the heart-sounds were normal. As the evening temperature rose to 38·6° C. (101·5° F.), and morphia gave no relief, the joint was punctured and washed out on the 26th. The fluid removed was purulent but not bloody. The genital organs were now examined, and some drops pressed from the urethra were found to contain 'gonococci,' but there were no organisms of any kind in the fluid removed from the knee-joint. Recovery soon followed, and it appeared likely that free movement of the joint would be regained. Dr. Kammerer refers to a paper by Petrone, who recorded two cases in which gonococci were found in the fluid removed from the joints affected by gonorrhœal arthritis. From the evidence furnished by these two cases, and the first of those observed by himself, the author considers it in the highest degree probable that gonorrhœal arthritis depends on the migration of gonococci to the affected joint by means of the circulation. To account for the absence of these organisms in his second case, he assumes that the fluid was ot examined early enough, and notes in connection with this that they were absent from the fluid removed by the second operation in the first case. Finally, Dr. Kammerer thinks that in his two cases injury was possibly the exciting cause of the arthritis, and that, by some slight change thus set up in the joint, a favourable soil was prepared for the development of the organisms subsequently transported from the diseased urethra to the joint.

2917. *Le Gendre on the Diagnosis of Syphilitic Chancre of the Tonsil.*—In a long paper published in the *Archives Gén. de Médecine*, January and March 1884, M. Le Gendre reports two cases of this kind observed by himself, and quotes eleven others from various sources. From an examination of these cases the author draws the following conclusions as regards diagnosis. Diphtheritic angina, gangrenous angina, epithelioma, and ulcerated gumma are the affections most likely to be confounded with the initial lesion of syphilis, which, when situated on the tonsil, may present very variable characters. Induration may be felt for, but in the majority of cases this will not be characteristic. Adenopathy is a

most important sign, but it occurs also in epithelioma and in diphtheria; the former disease, however, is often attended by more constant as well as by lancinating pains. The initial lesion of syphilis gives little pain when the patient is not swallowing. In cancer, the glands are moderate in size and painful on pressure. In primary syphilis there is one large gland which is very hard, indolent, and only slightly movable, surrounded by other small glands. The general condition of the patient must also be considered. The limitation of the affection to one side of the throat is very much against diphtheria, as also is the length of time the patient has usually suffered before advice is sought. The surface of the syphilitic ulcer also is easily cleansed, and the detritus is pultaceous and friable, rather than pseudo-membranous and tough. In the case of the initial lesion, there is rather extensive surrounding redness and swelling. In gumma, these signs are usually absent. Gumma also does not cause so much trouble in swallowing, nor so much salivation as the initial lesion. M. Brouardel had a case of tubercular ulceration of the tonsil, in which there was a temporary doubt as to primary syphilis. The soft chancre appears never to have been observed on the tonsil. Of the thirteen cases of primary syphilis of the tonsil dealt with in this paper, seven were men and six were women. One of the women had contracted the disease through sucking the bottle of her syphilitic grandchild, and another by kissing her grandchild, who had mucous patches on its lips. The author agrees with M. Diday that kissing is the most frequent mode of contagion, and that this occurs by suction of the contagious material into the large open lacunæ of the tonsil.

2919. *Keyes on Experiments with recently recommended Remedies in Gonorrhœa.*—Dr. E. L. Keyes records (*Jour. of Cutaneous and Venereal Diseases*, March 1884) the result of his trials of some of the methods recently recommended for the abortive treatment of gonorrhœa. He first relates five cases treated by deep urethral irrigation by hot water, according to the plan recommended by Dr. Curtis. [*See* London Medical Record, August 1883, *Rep.*] Case 1.—An old offender with a tough urethra; twenty-four hours after irrigation considerable pain on micturition, inflammatory œdema. Soon recovered with rest. Another attack some weeks later was cured in a few days by simple injections of sulpho-carbolate of zinc. Case 2.—A first attack. Hot water treatment tried for ten days. Only temporary subsidence of discharge. Well in five weeks under ordinary treatment. Case 3.—The first irrigation caused swelling of the penis and increase of discharge, which lasted three months and was complicated with mild cystitis. Case 4.—A fresh case of gonorrhœa in a mulatto. Discharge temporarily arrested, then returned. After three weeks' treatment given up. Slow cure by ordinary means. Case 5 was a counterpart of Case 2. Two other cases which had been treated by irrigation by other medical men also came under Dr. Keyes' care; one of them had acute prostatitis; the other, who had been told to inject hot water with an ordinary syringe very frequently, was in bed with a free discharge at the end of the eighth week, and also subsequently suffered from cystitis, prostatitis, and epididymitis. Of other abortive methods Dr. Keyes also tried iodoform bougies (2 grains in each) which failed totally. He then tried injections of corrosive sublimate, beginning with $\frac{1}{4}$ grain to 1 oz. This he found too strong for frequent use in first cases; but some 'old stagers' with spurious gonorrhœa liked it, and obtained moderately good results. With a solution of $\frac{1}{6}$ grain to 1 oz., did not succeed in aborting a single case out of several in which it was used. In one case, after a plastic operation on a healthy urethra, Dr. Keyes attempted to irrigate with a 1 in 2,000 solution. The urethra swelled, so that it was temporarily occluded at the point where the fistula had been; and in two days, under continued injections, abundant creamy suppuration occurred, and continued for a number of days after the injection was left off. Dr. Keyes' temporary conclusions are these. 1. A mild corrosive sublimate solution irritates the urethral mucous membrane more than it seems to irritate an open wound. 2. It appears that an abortive treatment of gonorrhœa is yet to be discovered. 3. The hot water treatment of gonorrhœa is unreliable.

2924. *Weber on Locomotor Ataxy and Syphilis.*—In a paper on this subject read before the New York Academy of Medicine (*New York Med. Jour.*, March 29, 1884), Dr. Weber remarked that it was not improbable that the irritation of the syphilitic poison might start such an inflammation as would lead to the lesions which had been found in posterior spinal sclerosis when other conditions were favourable for its development. He himself had records of seventeen cases of tabes, and had found syphilis as an etiological factor less often than several other conditions, *e.g.*, rheumatism and sexual excess. The author drew the following conclusions. 1. There is not sufficient evidence to show that syphilis may be the direct cause of a typical form of locomotor ataxy. 2. There is proof that syphilis produces certain lesions in the spinal cord and its meninges as surely, if not as frequently, as in the brain. These lesions are often followed by symptoms of tabes, and are generally relieved by prompt and energetic specific treatment, but rarely cured. 3. According to the author's experience, the tendency of syphilis to produce lesions in the nervous centres occurs the sooner, the less its course is interfered with by judicious and long-continued antisyphilitic treatment. Older cases are more apt to develop neuroses than those of recent date. 4. As shown by all observers, after syphilitic lesions of the cerebral nervous system are once established, they may often be relieved, but seldom, if ever, cured by specific measures. In syphilis, therefore, we have reasons for insisting upon early and long-continued treatment. 5. The inunction treatment with mercury, in early cases of syphilis, is the best means of reducing the disease to an early and harmless latency.

2928. *Ramonat on Syphilis in Scrofulous Patients.*—M. Ramonat is of opinion (*Thèse de Paris*, 1883, and *Revue des Sciences Médicales*, April 1884) that the manifestations of syphilis in scrofulous and tuberculous patients are often modified by those diatheses in their objective characters, symptoms, and course. The syphilitic lesions which are most frequently influenced are the indurated sore, the enlarged glands, the syphilides, and the affections of the eyes and bones. In scrofulous persons syphilis has generally a marked tendency to suppuration, which may affect the eruptions on the skin or mucous membrane, or the enlarged glands. These abnormal manifestations, though partaking of the characters of both diatheses, seem to depend on the syphilis, for they disappear under specific treatment, and their tendency to recur does not outlast the syphilis. In

tuberculous persons, syphilis tends to excite and precipitate tubercular lesions. It creates points of least resistance, which are liable to be attacked by tuberculosis. The larynx is an organ frequently affected by both diseases. In scrofulous subjects, specifics ought always to be combined with tonic and restorative treatment. In tuberculous persons, the early stages of syphilis ought to be carefully watched, and proper treatment resorted to at once; for the slightest specific manifestation may rouse tuberculosis into activity, and thus lead to a fatal result.

2929. *Blackwood on Communication of Syphilis to the Fœtus.*—In the *Philadelphia Medical Times*, April 19, Dr. W. R. D. Blackwood discusses the question: Can a man affected with syphilis communicate the disease to a healthy fœtus without infecting its mother? Can a man beget a syphilitic child without infecting its mother? His reply to the first question is in the affirmative; and in support of his opinion he relates the case of a lady whose husband contracted syphilis during her second pregnancy in 1878, and had intercourse with her about the thirteenth week of utero-gestation. The child was born at term, but had snuffles within twelve hours, and a syphilitic rash with ulceration of the soft palate and pharynx in a fortnight. This lady had another child in 1881, which was also syphilitic, the throat being affected three weeks after birth. The father had been treated with mercury, and in less than a year after contagion was apparently well. Both children were treated with mercury and both recovered. The author states that not the slightest sign of syphilis has ever appeared in the mother and that he has watched her closely. [In the history of the above case, which is put forward to prove that the mother of a syphilitic child may herself remain free from taint, nothing is said as to whether the lady suckled her two children, both of whom had syphilitic lesions of the throat within three weeks after birth; but assuming that she did so, the case would seem to be a good example of the truth of Colles' Law.—*Rep.*] The author also gives an affirmative answer to the second question, and records the particulars of two cases in support of it. In the first of these, the wife of a syphilitic man was delivered by Dr. Blackwood of a dead child, of which his description is as follows. 'The child was absolutely rotten. The placenta was a putrid mass which was almost pultaceous. . . . The amniotic fluid was pea-green, slimy, abundant, and horribly offensive. I have a strong stomach . . . but the stench and sight of that infant's body and its concomitants almost turned me inside out. I vomited like a cholera patient, and I smelt worse than a skunk.' . . The woman made a good recovery, and was again confined a little more than two years afterwards of a dead child, in a condition similar to that of the former one. It was 'livid, copper-coloured, and green in splotches.' Forceps were used in the delivery. The evidence of syphilis in the child, and absence of syphilis in the mother, is thus given by Dr. Blackwood. 'The doctor who kindly assisted me has had a large obstetrical experience, and he agreed with me as to the syphilitic condition of the child, and the patient was also critically examined by him, at my request, to determine the question whether or not she had any evidence of constitutional syphilis. Another gentleman of very large experience . . . also carefully examined the woman subsequently with the same object in view. A third physician, well posted in venereal diseases, has added his opinion, and the united testimony of all is that' (author's italics) '*the woman is free beyond doubt from syphilis in any form, and has never had it.*' The last illustrative case is that of a woman whose husband had contracted syphilis early in life. Two years after marriage his wife was attended by Dr. Blackwood for a miscarriage at the seventh month. The fœtus was 'plainly syphilitic.' Subsequently she miscarried three times, the fœtus in each case being 'undoubtedly syphilitic,' while the mother was apparently in perfect health.

2934. *Taylor on Chancre of the Tonsil.*—Dr. R. W. Taylor reports (*New York Med. Jour.*, May 24, 1884) five cases, seen by himself, in which the initial lesion of syphilis was seated on the tonsil. Three of the cases are given in detail, one of them being that of a medical student in whom the sore on the tonsil appeared one month after mouth-to-mouth inflation of the lungs of a new-born child, followed by rinsing his mouth with gin from a bottle belonging to the mother. In the other four cases (two males and two females) contagion is stated to have been due to unnatural practices which, Dr. Taylor says, have increased to an alarming extent in America of late years. ARTHUR COOPER.

2935. *Volsky on the Influence of Acute Febrile Diseases on Syphilis.*—In the *Russkaia Meditzina*, No. 15, 1884, p. 346, Dr. V. Volsky, of Bendery, describes the case of a patient, aged 26, who presented numerous signs of syphilis (general enlargement of glands, corona veneris, papules and pustules, infiltrations over the back, angina, mucous patches in the fauces, osteocopic pains, headache, &c.), and in whom, after an accidental contracting of erysipelas from a fellow-patient, the original disease almost entirely disappeared during 18 days' existence of the intercurrent highly febrile affection. In fact, there remained only some swelling of lymphatic glands. However, eighteen days after the recovery from the erysipelas there again appeared osteocopic pains, throat-symptoms, and ecthymata over the shoulders, back, and lower extremities. The patient was ultimately cured by the usual mercurial treatment (which had been tried also before the outset of erysipelas, but did not then lead to any considerable improvement). Dr. Volsky describes another case of syphilis complicated by relapsing fever; no changes whatever in the course of the syphilis were observed in this patient. V. IDELSON, M.D.

2936. *Curnow on Syphilis and Aphasia; Gummata in the Cerebral Cortex.*—Dr. Curnow, in the *Med. Times and Gazette*, April 1884, p. 491, records the case of a man, aged 32, who suffered from primary syphilis, followed in five years by symptoms pointing to a growth in the brain. He was admitted into King's College Hospital with aphasia, which commenced the previous day whilst the man was at work; one of his mates spoke to him, and he found himself unable to answer; he had a severe headache at the time, but no fit. He took thirty grains of iodide of potassium every four hours, and in about ten days the aphasia had nearly disappeared. Perchloride of mercury was also given, and for some days the patient improved, but after about six weeks the headache and aphasia came on again, with loss of consciousness and gradual weakness, so that he died about two months after admission. *Post mortem* examination revealed three tumours in the cerebral cortex, each of the size of half a crown, superficially in the left supramarginal convolution; one of the size of a filbert on the orbital surface of the left frontal lobe,

just in front of, but not invading, the fissure of Sylvius; and one as large as a shilling on the orbital surface of the right frontal lobe, outside and in front of the triradiate sulcus.

Richard Neale, M.D.

OPHTHALMOLOGY.

RECENT PAPERS.

2937. Bufalini and Tassi.—Jequirity. (*Rivista Chemica*, Dec. 1883.)

2938. Denti, Francesco.—On Retinitis Pigmentosa. (*Gazz. Med. Ital. Lombardia*, March.)

2939. De la Peña, A.—The Treatment of Granular Lids by Jequirity. (*El Siglo Medico.*, Feb. 10, 1884.)

2940. Katzauroff, T. N.—On the Influence of Accommodation on the Visual Field. (*Vratch*, 1883, No. 2, p. 20.)

2941. Robertson.—A Case of Detachment of the Retina. (*Brit. Med. Jour.*, May, p. 856.)

2942. De Tatham.—Temporary Amaurosis from Exposure to the Vapour of Dilute Hydrocyanic Acid. (*Brit. Med. Jour.*, March, p. 409.)

Art. 2937. *Bufalini and Tassi on Jequirity.*—In the spring of last year, Dr. Wecker (*Comptes Rendus*, May 15, 1883) gave an account of the action of the seeds of abrus precatorius or jequirity, a leguminous plant, and advocated its use in obstinate forms of pannus and granular lids. Its therapeutic value consists in the fact that an infusion, when introduced within the ocular conjunctiva, sets up an acute specific conjunctivitis (conjunctivitis jequiritica). Dr. Wecker stated that the action was due to the extremely rapid multiplication of a particular bacillus in the tissue, immediately after the infusion was brought into contact with it; and, moreover, that the inflammatory action was not produced if the infusion was in any way rendered sterile. Bufalini and Tassi (*Rivista Chemica*, Dec. 1883) have recently experimented on this action of the infusion of jequirity seeds, and also on those of its ally, rhynchosia precatoria, with the following results. 1. A fresh infusion of jequirity seeds (16 seeds to 100 centigrammes of water) produces the specific conjunctivitis when introduced into the conjunctival sac of a rabbit, although it has been mixed with antiseptic fluid—namely, with a mixture of salicylate of soda, boracic acid, and resorcin. 2. This infusion, thus rendered antiseptic, will retain its activity for twenty to twenty-four days; but is inert after about forty days' keeping. 3. The infusion, when introduced into the dorsal sac of a frog in a dose of one centigramme, is an active poison, resembling veratrin in its convulsive action and in its effect on muscular contractility. 4. The infusion of the seeds of rhynchosia precatoria (32 seeds to 100 centigrammes) produces a similar croupous conjunctivitis, as does that of abrus precatorius, but less intense. This action is also not inhibited by admixture with antiseptics. 5. In its general action rhynchosia also resembles jequirity in all respects, but is less powerful. [See also on this subject a memorandum by Dr. Murrell in the *Brit. Med. Jour.*, Nov. 29, 1883, p. 1015, on abrus precatorius and sui poisoning. There is also an account of the action of jequirity, by V. Cornil and A. Berlioz, in the last number (No. 8, 1883) of the *Archives de Physiologie.*—*Rep.*]

Walter Pye.

2938. *Denti on Retinitis Pigmentosa.*—A special form of retinal pigmentation, congenital, is met with, corresponding to the form described (*Gazz. Med. Ital. Lombardia*, March) under the names of 'morbus Arianus,' retinitis 'tigrata,' retinitis pigmentosa, pigmental degeneration of the retina, &c. Congenital pigmentation of the retina is characterised by bilaterality of the form, chronic hemeralopia, concentric and progressive limitation of the field of vision, pigmentation of the retina beginning at the periphery and spreading gradually towards the papillæ, central vision remaining for a long time unaffected. The diagnosis of congenital retinal pigmentation cannot be made from one or two of these symptoms in the absence of the others. All concur in equal measure in the diagnosis, and the disease only exists when all are present. When any of the symptoms are wanting, it will be found, on close inquiry, that one has to do with an acquired form. Throughout the course of the congenital form there are never symptoms, objective or subjective, of inflammation. Neuro-retinal and vascular retinal alterations are always wanting in the early stages of the congenital form, while they are constantly present in the advanced disease; they must therefore be considered as secondary. The congenital form is hereditary. It occurs in the children of consanguineous marriages, and often accompanies lesions of evolution, and chiefly in the nervous system, as imbecility, deaf-mutism, &c. The progress is eminently chronic; beginning in the earliest infancy it results in blindness about the fortieth year. The prognosis is of the worst, blindness resulting while the patient is in the fulness of his intellectual and physical strength. No treatment is of any avail. As to the pathogenesis, the author holds that congenital pigmentation primarily affects the rods and corresponding pigmented epithelium. At first there is a simple disturbance of a physiological act (migration of pigment); the infiltration of the retina by pigment necessarily disturbs nutrition, the nerve-elements are compressed, perhaps also disseminated irritations follow, resulting in increase of connective tissue and atrophy of the nerve-elements. So there is at first defect of impressionability (hemeralopia), then of retinal conduction (restriction of the peripheral field), and, finally, blindness as the manifestation of the consecutive final retinal sclerosis. The author would reject the old names of retinitis and of pigmental degeneration, and would define the disease a pigmentation of the retina, congenital, progressive, and atrophic.

2939. *De la Peña on the Treatment of Granular Lids by Jequirity.*—Dr. de la Peña gives the following conclusions as the result of his experience of jequirity (*El Siglo Medico.*, Feb. 10). 1. This remedy, as a rule, cures granulations positively and permanently. 2. It is to-day the specific for granulations of the conjunctiva. 3. It is more efficacious in non-inflammatory or chronic states without much secretion than in acute cases. 4. It also cures other ocular affections, such as pannus, pustular keratitis, &c. 5. When properly used, there is no danger of its producing a too severe action on the eye. 6. Heat destroys its therapeutic properties; its maceration must, therefore, always be cold. 7. It is dangerous to leave it in substance on the cornea, as it then causes ulceration. 8. Jequirity is harmless, and the cornea is uninjured by it when used in the manner directed. 9. There is no substitute for it; neither cantharides nor any of the euphorbiaceæ

have the same effect. 10. The inflammation it produces is very marked, but is painless. 11. It is not necessary to keep the patients in a dark room ; they may present themselves every day for examination. 12. An eye treated by jequirity may again be so treated after some interval, if necessary. 13. The curative action may be delayed for a month or six weeks, or even more. 14. As a general rule, the patients are positively free from the granulations in 10, 15, or 30 days. G. D'ARCY ADAMS, M.D.

2940. *Katzauroff on the Influence of Accommodation on the Visual Field.*—From a number of observations on himself and several patients, Dr. T. N. Katzauroff deduces (*Vratch*, No. 2, 1883) the following conclusions. 1. When accommodation is at work, the visual field is larger than when it is at rest (as has been already stated by Liebreich, Aubert, and Emmert.) 2. The fact of the choroid and retina being moved forwards during accommodation is beyond any doubt. 3. The movement of the choroid and retina, both in healthy and in aphakic eyes, is caused by the contraction of the ciliary muscle. 4. The enlargement of the visual field during accommodation in aphakic eyes (after Graefe's operation) is caused exclusively by the movement of the retina. 5. The parts of the retina, lying anteriorly from those which determine the extreme limits of the visual field, are blind. 6. In the non-aphakic eye, the enlargement of the field of vision during accommodation is obtained through a conjoint movement forwards, both of the retina and of the plane of the pupil. 7. The constriction of the pupil, though antagonistic to the movement of the retina and of the plane of the pupil, does not destroy, but only somewhat weakens its influence.

V. IDELSON, M.D.

2941. *Robertson on a Case of Detachment of the Retina.*—Dr. McGregor Robertson, in the *Brit. Med. Jour.*, May 1884, p. 856, reports a case of detachment of the retina, with complete loss of sight, cured by an operation by Dr. Wolfe. A man, aged 38, applied for advice. He had been blind with his right eye for three years, and for the last two years the left eye had been affected until he was unable to see to walk about. On examining the left eye, a nebulous cornea was detected, with complete detachment of the retina, and the presence of large flocculi floating in the vitreous humour. The eye became worse, and an operation was decided upon ; accordingly Dr. Wolfe performed the following under chloroform. The conjunctiva and fibrous tissue having been opened, the sclerotic was laid bare and punctured in the posterior hemisphere of the globe, in the line of the vertical meridian. Only a small quantity of serum oozed out each time the flat probe was introduced through the opening made. The wound in the conjunctiva was closed with a silk ligature ; on removing this, six days after the operation, vision was so much improved that the patient could see faces and count fingers at 18 inches distance. The vision was, however, limited to the outer part of the field, the inner being still a blank. The ophthalmoscope showed a detachment to the lower and outer part of the fundus. The tension in the eye being normal, Dr. Wolfe determined to repeat the operation. This was done five weeks after the first. The section was made in the space between the inferior and external recti muscles, the eyeball was rotated upwards and inwards, and the lance pushed through the sclerotic in the posterior hemisphere at the region of the detachment. This time, unlike what happened on the previous occasion, a considerable quantity of serum gushed out as soon as the puncture was made. No ligature was applied, and the eye was bandaged for four days ; then the patient could count fingers with ease, even at the distance of several feet. The field of vision was complete. He could read Snellen's type 20 at 15 inches' distance, and tell the time, almost to a minute, on an ordinary white-faced watch.

RICHARD NEALE, M.D.

2942. *De Tatham on Temporary Amaurosis from Exposure to the Vapour of Dilute Hydrocyanic Acid.*—Dr. De Tatham, in the *Brit. Med. Jour.*, March 1884, p. 409, records the case of a lady who had suddenly become blind. On inquiry, it was found she had been trying to clean some old gold lace with hydrocyanic acid, about a quarter of an hour before her breakfast ; after rising from the breakfast-table, she complained of being unable to see. Nothing abnormal could be detected, but there was hemiopia. In the course of four or five hours there was no trace of the hemiopia, and only a slight headache remained.

RICHARD NEALE, M.D.

DERMATOLOGY.

RECENT PAPERS.

2943. VIEIRA DE MELLO. Elephantiasis and its Treatment by Electricity. (8vo., 204 pp., Rio de Janeiro; and *O Correio Medico de Lisboa*, Feb. 1884.

2944. SILVA-ARANJO AND MONCORVO.—On the Employment of Electricity in the Treatment of Elephantiasis Arabum. (*Congrès Internat. d'Electricité de Paris*, 1881 ; *Uniaô Medica*, 1882, No. 12, p. 548.)

2945. POISSON, PROF.—Typical Scleroderma of the Face, Neck, and Extremities ; Death probably from Uræmia. (*Annales de Derm. et de Syph.*, March 1884.)

2946. DOYON AND DIDAY.—A Case of Non-febrile Recurring Labial Herpes. (*Annales de Derm. et de Syph.*, March 1884.)

2947. REINHARD.—Periodical Change of Colour in the Hair. (*Wiener Med. Blätt.*, Feb. 14 and 21.)

2948. VON HEBRA.—Treatment of Sycosis. (*Wien. Med. Blätter*, April 24.)

2949. CLARAC.—The Etiology and Pathology of Elephantiasis Arabum. (*Thèse de Paris.*)

2950. COLLIER.—The Treatment of Lupus Vulgaris by the Local Application of Sulphurous Acid. (*Med. Times and Gazette*, April, p. 551.)

ART. 2943. *Vieira de Mello on Elephantiasis and its Treatment by Electricity.*—This is an important monograph on elephantiasis. One hundred and fifty cases are given, many of them occurring in the clinics of Professors Silva Aranjo and de Moncorvo. Elephantiasis has probably existed from time immemorial, but was first described by Arab authors, neither Greek nor Latin making any mention of it. It has been confounded with morphœa or elephantiasis Græcorum, hence the multiplicity of names given it by various authors. All causes capable of producing lymphangeitis are *ipso facto* causes of elephantiasis, and among these irritants occupy the first place. Elephantiasis being a consequence of lymphangeitis, its frequency is correlative with the causes favouring the evolution of this ; and hence its endemicity in hot climates. Lymph is poured out into the subcutaneous cellular tissue by the lymphangeitis, and is not reabsorbed, either because absorp-

tion is in abeyance or because fresh attacks increase the flow; this becomes organised, and constitutes the elephantiasis. Taking its point of departure in the lymphatic system, here it is that the most important alterations are met with. From the integument to the bones, the process of elephantiasis spares no tissue. In the initial stage, the symptoms are those of lymphangeitis; in the period of transition, asymmetrical œdema or simple tumefactions, and preceding acute or subacute lymphangeitis. In the chronic or elephantiasic period, the induration of the affected tissue, the immense deformity of the affected part, the history especially of lymphangeitis, leave no doubt as to the diagnosis. The prognosis may be said to be favourable, though the duration is uncertain. The lymphangeitis varies from a few hours to eight days, rarely more. Whatever concurs to diminish the organic resistance, to embarrass the centripetal circulation, or produce an irritation of the lymphatic system, must be considered as complications or as accelerating the march of elephantiasis. Death occurs very exceptionally, and then from lymphatic abscess or one of the complications. Termination by gangrene, mentioned by some authors, Dr. Vieira de Mello has never met with. The treatment of lymphangeitis consists in the administration of large doses of quinine, purgatives, sedatives, and astringents internally, and in the abstraction of the affected parts from the irritating action of the air by means of antiseptics and flannel. The only treatment of any avail is that by electricity, either galvanism or faradism, employed simultaneously or separately as Professors Silva Aranjo and Moncorvo recommend. The cure seems permanent.

2944. *Silva-Aranjo and Moncorvo on the Employment of Electricity in the Treatment of Elephantiasis.*—The authors communicated their first note on this subject to the Academy of Sciences of Paris (1880) and to the Academy of Medicine (1881). More than a century ago Henley treated successfully a case by electricity (Alard, *De l'Inflammation des Vaisseaux Absorbans (sic) Lymphatiques dermoides et souscutanés*, Paris, 1824, p. 589). When Silva-Aranjo employed electricity for the first time in 1879 for a case of elephantiasis of the scrotum, he neither knew of this case nor of those of Beard and Rockwell (Tibbits's *Handbook of Med. and Surg. Elect.*, London, 1877). For the galvanic currents the authors employ a battery of 40 to 60 elements of Trouvé (sulphate of copper), placing the negative pole on the different points of the affected part, the positive pole on the sound skin, more or less near. The duration of each application varies from five to thirty minutes. For faradisation they use an apparatus of Trouvé, and employ the two methods together or separately in the same patient and in the same séance. In very severe cases, they have had recourse to electrolysis with all Listerian precautions. Their conclusion is that electricity, if it do not constitute a means of infallible cure, applicable to all cases of elephantiasis, represents the best therapeutic means known at present. M. Besnier, from whose paper in the *Annales de Derm. et de Syph.*, March, 1884, we take the above, adds that judgment must be suspended concerning the *permanence* of the cures by this treatment. Trials of this treatment have been successfully made in the service of Professor Oliveira Feijaô, of Lisbon, and are in course of execution at Vienna, in the division of Professor Kaposi, by Riehl.

2945. *Poisson on Typical Scleroderma of the Face, Neck, and Extremities; Death probably from Uræmia.*—Madame G. G., aged 55, of good family and personal history, never suffered from rheumatism or eczema. In 1876 she had double pleurisy, from which she dated her illness. Dr. Poisson first saw her in 1878; she was then a well-preserved woman, rather stout, troubled with a paroxysmal cough, probably from pleuritic adhesions. Her friends were much struck by the alteration of her face, which had lost its habitual expression, and was singularly modified. The nose was sharpened, and the cartilage showed through the thin skin; the division between the bone and cartilage was accentuated; excoriations, painful and slow to heal, often appeared on the nostrils. The lips were thin, and seemed strained over the teeth, being often ulcerated. The cheek-bones were more prominent than natural, from tension of the skin. The cartilages of the ears were covered only by fine transparent skin; they were adherent to the skin surface and frequently ulcerated. The neck was stiff, and movement painful. The trunk, arms, and legs were normal. At the level of the styloid apophysis of the radius, however, and of the external malleoli, the skin was rugose, thick, and almost elephantiasic. Sometimes violent irritation existed. The fingers were stiff and painful in movement; the skin was glued to the bones, rugose, desquamating, and the epidermis cracking, exposed the naked dermis. The hands were generally cold and difficult to warm. This state lasted, with temporary ameliorations and aggravations, until 1883; in the winter of 1881 she had several slight attacks of bronchitis; in June 1883, œdema of the ankles appeared for the first time. Oppression of the breathing became greater, nutrition failed, the nights were bad, feverish, and restless. The urine was scanty, with traces of albumen. The sclerodermic changes were the same. Under a milk-diet she improved: but, soon tiring of this, the œdema rapidly increased, ascites appeared, the right heart appeared dilated, and oppression became extreme. The urine was scanty, but all trace of albumen disappeared. In October, on wishing to get up, she was seized with syncope, and died. M. Besnier remarks that this was evidently a case of scleroderma properly so-called, *i.e.* of trophic dermato-sclerosis, of central origin, and of which the process, commencing at the periphery, terminated in visceral lesions, belonging directly to the same pathological state, and which demand fresh study.

2946. *Doyon and Diday on Non-febrile Recurrent Labial Herpes.*—A merchant, aged 30, of good family and personal history, for several years had suffered from digestive troubles, with constant headache. Since 1874 (five years) every three or four months a more or less confluent vesicular eruption appeared on the lips, preceded by sensations of burning and itching, lasting about twelve days. Epidermic scales were then detached, leaving more or less coloration, which gradually disappeared. These attacks were always preceded by marked aggravation of the headache and dyspepsia. When the eruption was well established, the patient noticed on his limbs, near the joints, especially the knees, malleoli, and wrists, the appearance of a large group of red patches slightly raised. These faded from the centre and were followed by slight desquamation. This was a case of labial herpes, but with all the characteristics of the affection described by Doyon as 'herpès génital recidivant.' Neither he nor any other author

has described a similar case. (Hebra refers to the fact of recurrence of labial herpes.) M. Diday adds that five years ago the patient, hitherto free from eruption, had on the upper lip a sore with one specifically distinctive character, the absence of adenopathy—a simple chancre, which Doyon has shown in his *Traité de l'Herpes récidivant des Organes Génitaux* to be the most common cause of recurring herpes in subjects predisposed by diathesis to this form of eruption. G. D'ARCY ADAMS, M.D.

2947. *Reinhard on Periodical Change of Colour in the Hair.*—The *Wien. Med. Blätt.* of Feb. 14 and 21 describes a case of periodical change of colour in the hair, observed by Dr. Reinhard, of Dalldorf, near Berlin, and believed to be unique in medical literature. The patient was an idiot girl, aged 13, who was for more than two years an inmate of the asylum at Dalldorf, where she died. She presented all the usual characteristics of a well-marked case of idiocy, with alternating fits of excitement and depression, each of which lasted about a week. Soon after her arrival in the institution, it was noticed that her hair was not always exactly the same in colour, and after some time the change in colour was seen to be synchronous with the change in disposition, the hair being of a golden red during the periods of excitement, and blond yellow in the fits of depression, when the skin was dry and brittle, and the scalp poor in sebaceous secretion. Washing the hair made no difference to this singular phenomenon; and trickery on the part of the attendants, in the way of using dyes or otherwise, was not possible. Carefully conducted microscopical and chemical examinations showed that the lighter coloured hairs contained a much greater quantity of air than the darker ones, not only in the medullary substance, but even between the peripheral cells; and the quantity was pathological, being much more than is found in the white hair of old age. It is suggested that the entrance of air into the shaft of the hair would be facilitated by the diminution of the sebaceous secretion during the period of depression.

2948. *Von Hebra on Sycosis.*—The *Wien. Med. Blätter* of April 24 contains an article by Dr. von Hebra, of Vienna, on a new treatment of sycosis. Being dissatisfied with the customary maceration of the skin by means of diachylon ointment, he sought, some years ago, to discover some means by which this might be prevented. He now employs almost invariably the following plan of treatment. Any hair which may be left on the parts affected is cut as close as possible with scissors, and some emollient ointment applied for twenty-four hours, care being taken that it does not contain lead, which, would form a compound with the sulphur to be subsequently employed. The crusts being by this time broken down, the part is shaved, by which means the tops of the pustules are removed and their contents evacuated. The whole of the affected surface of the face is then covered with a modification of Wilkinson's ointment, included in the Hungarian pharmacopœia under the name of 'Unguentum contra scabiem,' which is covered with a piece of flannel and secured by a calico bandage. This dressing is changed every twenty-four hours, when the contents of each pustule are pressed out, and the hair which is usually found in the centre removed. When all the pustules have disappeared, the redness and scurf are removed by the application of an ointment containing one part of zinc to three of vaseline, and the cure is complete, in some cases within a few days. Several cases are cited in illustration. ALICE KER, M.D.

2949. *Clarac on the Etiology and Pathogeny of Elephantiasis Arabum.*—Dr. Clarac, in a doctoral thesis on the above subject, states that elephantiasis results from disturbed circulation, which is manifested by chronic or acute œdema. Hypertrophy of the skin is characteristic. During the course of this affection, inflammation may be or may not be present. Elephantiasis may be provoked by impeded venous or lymphatic circulation, such as varicose veins, affections of the glands, &c., by the conditions which determine erysipelas of the genital organs or limbs, also by constant irritation, humidity, &c. There are no data to warrant the belief that elephantiasis is a virulent affection; but it may be admitted that the presence of a parasite obstructs and irritates the lymphatic system. Syphilis also may be regarded as a predisposing agent. It seems to be demonstrated that malaria has an influence on erysipelas, the starting point of elephantiasis. The influence of the nervous system in the pathogeny of cutaneous affections indicates that it is not inert with regard to elephantiasis. W. VIGNAL.

2950. *Collier on the Treatment of Lupus Vulgaris by the Local Application of Sulphurous Acid.*—Dr. Collier, in the *Med. Times and Gazette*, April 1884, p. 551, brings forward some cases of lupus vulgaris treated locally by sulphurous acid. Recognising its powerfully destructive effects upon some forms of micro-organic life, it will not be difficult to conceive how its curative results may be produced in lupus vulgaris. In addition to its germ-destroying influence, sulphurous acid also exerts a powerfully stimulating action when applied to the surface of open wounds, especially in cases of indolent ulcer, &c. In gonorrhœa its effects, as an injection, are most marked. It is best applied locally in the form of an oil, made by dissolving the anhydrous acid in castor oil. RICHARD NEALE, M.D.

ORTHOPÆDIC SURGERY.

RECENT PAPERS.

2951. ALLEN.—Caries of Spine; Abscess behind Descending Aorta. (*Austral. Med. Jour.*, 1883, No. 5.)

2952. BANHAM AND JACKSON.—Spinal Caries; Paraplegia; Trephining; Relief of Symptoms of Pressure. (*Brit. Med. Jour.*, 1883, Vol. i.)

2953. BERGEAUD.—Case of Bright's Disease following and complicating a Case of Pott's Curvature of Rheumatic Origin; Death. (*Union Méd.*, 1883.)

2954. BOECKEL.—On 'L'évidement' of the Vertebral Bodies. (*Mém. Soc. de Méd. de Strasbourg* (1881–82), 1883.)

2955. BRADFORD.—Ankylosis of the Spine; three cases following Rheumatism, two being of Gonorrhœal Origin. (*Ann. of Anat. and Surg.*, 1883, No. 7.)

2956. BURRELL, H. L.—Spinal Caries; Abscess Discharging through Intestine; Closure of Intestinal Opening; Death from Bursting of Abscess into Peritoneal Cavity. (*Boston Med. and Surg. Jour.*, 1883, Vol. i., No. 22.)

2957. BUSCH, F.—Case of Cancer of Spine; Specimen. (*Verhand. der Berl. Med. Gesell.* (1881–82), 1883.)

2958. CHARCOT.—Paraplegia from Pott's Disease. (*Gaz. des Hôp.*, 1883, No. 56.)

2959. COOPER, E. H.—The Prior Use of Silica Spinal Jackets. (*Med. Bull. Philad.*, 1883, No. 5.)

2960. DALLY. — Treatment of Spinal Deformities. (*Jour. de Thérap.*, 1883, No. 10.)

2961. DESPRÈS.—Acute Scoliosis; Muscular Atrophy Consecutive to Typhoid Fever; very quick Improvement. (*Union Med.*, 1883, No. 35.)

2962. DIEUDONNÉ. — Vertebro-Costal Caries; Pulmonary Tuberculosis, and Sclerosis of the Lateral Columns of the Spinal Cord; Necropsy. (*Arch. Méd. Belges*, 1883, No. 24.)

2963. DOLLINGER, G.—Early Operative Treatment in Suppurative Spondylitis. (*Orvosi hetil.*, 1883, No. 27, and *Pest. Med. Chir. Presse*, 1883, No. 19.)

2964. DUBRUEIL.—Cervical Arthritis; Unilateral Dislocation of the Atlas. (*Gaz. Méd. de Paris*, 1883, No. 38.)

2965. FALKSON.—A Simple Method of Treating Cervical Spondylitis and Wry Neck. (*Berlin Klin. Wochensch.*, 1883, No. 20.)

2966. FOWLER, G. R.—Wolf's *versus* Coover's Spinal Jacket. (*Med. Bull. Phil.*, 1883, No. 5.)

2967. FREER, E. L.—The Treatment of Spinal Curvature by Extension and Articular Motion. (*Brit. Med. Jour.*, 1883, Vol. i., 151.)

2968. GILLIS.—Fatal Case of Cervical Caries. (*Arch. Méd. Belges*, 1883, p. 220.)

2969. GOWERS, W. R.—Memoranda on Eye-Symptoms in Spinal Diseases. *Med. Times and Gazette*, 1883, Vol. i., No. 295.)

2970. HOPKINS, J., AND R. PARRY.—Three Cases of Caries of the Spine in Tailoresses. (*Lancet*, 1883, Vol. i., p. 539.)

2971. JASINSKI. — Syphilitic Perispondylitis. *Gaz. Lek. Warszawa*, 1883, p. 881.)

2972. KAHLER, O.—Symptoms of Compression of the Spinal Cord by Tubercular Caries of the Lower Cervical Vertebræ. (*Prag. Med. Wochensch.*, 1883, p. 458.)

2973. KAREWSKI.—Description of a New Corset for Scoliosis. (*Berliner Klin. Wochensch.*, 1883, No. 20.)

2974. KOLACZEK.—The Theory and Treatment of True Dorsal Scoliosis. (*Breslauer Aertzl. Zeitschr.*, 1883, No. 5.)

2975. LACHARRIÈRE.—Spinal Abscess. (Treatment.) (*Thèse de Paris*; *Centralbl. für Chirurgie*, 1884, No. 31.)

2976. LANNELONGUE.—Pathogeny of Spina Bifida. (*Revue de Chirurgie*, April 1884.)

2977. LAW.—Case of Obscure Pott's Disease in an Adult. (*Med. Press and Circ.*, 1883, No. 36.)

2978. LEWANSKI.—Treatment of Disease of Atlas by a Plaster Apparatus. (Paris, 1883.)

2979. LEMOINE.—Rachialgia. (Paris, 1883.)

2980. LUND, E.—The Treatment of Spinal Curvature by Reclination in its Early Stages. (*Brit. Med. Jour.*, 1883, Vol. i., p. 221.)

2981. MACKENZIE, J.—A Case of Spinal Injury with 'Paradoxical Contraction.' (*Lancet*, 1883, Vol. ii., p. 942.)

2982. MIKULICZ, J.—Scoliosometer (Apparatus for Measuring Extent of Scoliosis). (*Cent. für Chir.*, 1883, No. 10.)

2983. MOORE, N.—Dorsal and Lumbar Vertebræ, with Rheumatic Arthritis. (*Lancet*, 1883, Vol. i., p. 409.)

2984. MORRISON, W. H.—Subacute Inflammation of the Cartilages and Periosteum of the Lower Portion of the Spinal Column. (*Philad. Med. Times*, Nov. 1883 [the reference given by *Centralblatt*, but not correct], and *Cent. für Chir.*, 1884, No. 15.)

2985. MORTON, T. G.—Clinical Lecture on Spinal Curvature, with Remarks on its Pathology and Treatment. (*Philad. Med. Times*, 1882–83.)

2986. PICQUÉ.—Clinical Reflections on the Use of Sayre's Corset in the Treatment of Scoliosis. (*Gaz. Méd. de Paris*, 1883, No. 5.)

2987. POUPINÈL. — Pott's Disease: Dislocation of Odontoid Process: Sudden Death. (*Le Progrès Méd.*, 1883, No. 11.)

2988. PRAVAZ.—Prognosis, as regards Curability, of Spinal Curvatures. (*Rev. de Chir.*, April 1884.)

2989. RAYMOND.—Pott's Disease: Unilateral Compression of the Cord: Crural Monoplegia, &c. (*Comptes Rend. de la Soc. de Biol.*, 1881–82.)

2990. ROBERTS, M. J.—Clinical Lecture on the Mechanical Treatment of Caries of the Lumbar Vertebræ. (*Lancet*, 1883, Vol. i., p. 132.)

2991. RODDICK, T. G.—Clinical Lecture on Pott's Disease, with Psoas Abscess. (*Canada Med. Jour.*, 1882–83, No. 11.)

2992. ROTH, B.—A Case of Lateral Curvature of the Spine, illustrating its Treatment without the Use of Mechanical Supports. (*Brit. Med. Jour.*, 1883, Vol. i., p. 772.)

2993. SCHEUPLEIN, C.—Wound of the Spinal Column, Acute Diabetes Mellitus; perfect recovery. (*Arch. für Klin. Chirurg.*, Band xxix., Heft 2; and *Centralbl. für Chir.*, 1884, No. 15.)

2994. SKLIFOSOVSKI, B.—The Etiology of Lateral Curvature. (*Centralbl. für Chir.*, 1884, No. 3.)

2995. SCHAUTA, F.—Lumbo-sacral Kyphosis. (*Wien. Med. Wochensch.*, 1883, No. 33.)

2996. SMITH, E. N.—Lateral Curvature. (*Lancet*, 1883, Vol. i., p. 90.)

2997. SMITH, E. N.—The Treatment of Caries of the Spine. (*Brit. Med. Jour.*, Dec. 15, 1883.)

2998. SONNENBURG, E.—Observations on the Value of Sayre's Plaster Jacket. (*Berlin, Klin. Wochensch.*, 1883, No. 3.)

2999. STAFFEL.—Orthopædic Gymnastics as the Basis of Treatment for Scoliosis. (*Verhand. der Phys. Med. Gesell. zu Würzburg*, and *Centralbl. für Chir.*, No. 10, 1884.)

3000. STILLMAN, C. F.—A Physiological Method of Treating Caries of the Dorsal Vertebræ. (*Boston Med. and Surg. Jour.*, Sept. 20, 1883.)

3001. STILLMAN, C. F.—Round Shoulders. (*New York Med. Record*, No. 24, 1883.)

3002. ST. GERMAIN.—Orthopædic Surgery. (Notice of in *Centralbl. für Chir.*, 1884, No. 10.)

3003. TILING.—Diseases of the Ilio-sacral Joint. (*Centralbl. für Chir.*, 1884, No. 3.)

3004. Discussion on Eye-Symptoms in Spinal Disease (*Brit. Med. Jour.*, 1883, Vol. i., p. 1180.)

3005. ROTH.—The Early Treatment of Flat Foot. (*Brit. Med, Jour.*, Nov., 1882, p. 989.)

3006. POUNDS.—Congenital Contraction of the Knee-Joints with Double Talipes. (*Lancet*, April.)

3007. OWEN.—The Simple Treatment of Congenital Club Feet. (*Ibid.*, April, p. 723.)

3008. SMITH.—On some Cases of Lameness from Abnormal Conditions of the Feet. (*Brit. Med. Jour.*, June, p. 1168.)

3009. DAVY.—The Relief of Intractable Club-Foot. (*Ibid.*, May, p. 899.)

3010. JUDSON.—The Cause of Rotation in Lateral Curvature of the Spine. (*New York Med. Record*, Sept. 20, 1882.)

ART. 2956. *Burrell on Spinal Caries with Abscess bursting into the Peritoneal Cavity.*—The diagnosis of abscess bursting into the peritoneal cavity rested, not upon the evidence of a *post mortem* examination (there was none), but on facts related by the author as follows. 'On Feb. 12, 1883, a painless, fluctuating swelling, of the size of an egg, was discovered just above the anterior third of the crest of the right ilium. On Feb. 25 the child suddenly complained of intense abdominal pain, and became collapsed. A few hours later, the swelling over the crest of the ilium had disappeared, and a slough, of the size of a three-cent piece, had begun to form over its site. The child died twenty-eight and a half hours later.'

2975. *Lacharrière on Spinal Abscess.*—In this essay, the author has collected twenty-eight cases of spinal abscess treated in the ordinary Listerian manner. Of these, five died, fourteen recovered without fistulæ, nine were doubtful as to result. With these he compares twenty-one cases treated by Lannelongue's method of multiple openings, drainage, and scraping the abscess wall. Of these, two died, fourteen recovered, five remained with fistulæ. He decides that complete removal of the pyogenic membrane is only possible in the case of dorsal and lumbar abscesses, while for iliac abscesses it is not always possible and often dangerous. The figures are too small to determine whether healing is surer and quicker after scraping.

2994. *Sklifosovski on the Etiology of Lateral Curvature of the Spine.*—The author states that in twenty-one cases of 'habitual' scoliosis, he seventeen times found shortening of one leg. Fourteen cases were girls, the remaining three boys. Eleven times the right thigh was longer than the left, twelve times the right leg below the knee was lengthened, eight times one leg was longer than the other both above and below the knee. Similar measurements were made in the case of young non-scoliotic people. Among nineteen such, five were found with asymmetry of the legs (one with the right leg longer, the other four with the left). In two-thirds of the above cases of scoliosis were found other disturbances of the development of the skeleton (genu valgum, pes planus and valgo-planus.)

2999. *Staffel on Orthopædic Gymnastics.*—In a short introduction, Staffel writes of lateral curvature as a simple 'pressure-deformity' (Belastung-difformität), brought about by unequal pressure on the elements of the spine, with consequent asymmetry of ligaments, muscles, fasciæ, and skin. Thus mere mechanical causes produce departures from the normal tissue-development, and, thereby, from the normal form and function of separate parts of the body. Then the author develops the principles upon which a rational gymnastic treatment of scoliosis must be based. Opposite conditions to those produced by the deformity must be aimed at, namely, extension of shortened parts, straightening of curved parts. Moreover, these improvements of position should be retained for a time, more or less long or short. The patient must learn to actively place himself in an improved position and to keep there.

3000. *Stillman on a Physiological Method of Treating Caries of the Dorsal Vertebræ.*—This paper reviews shortly the various spinal braces in common use, and finally describes one of the author's own invention. The objects of this are essentially the same as those of Taylor's brace; but the perpendicular bars rising behind from the pelvic girdle consist of two superimposed pairs, of which the 'superficial' pair (to use an anatomist's term) alone exercise backward traction, the 'deep' pair being immovably fixed to the pelvic girdle, and exercising counter pressure on the hump. The paper is illustrated.

3002. *St. Germain on Orthopædic Surgery.*—In this author's work on orthopædic surgery it is stated that in angular curvature in the cervical region Déloré's *redressement brusque*, under chloroform, gives good results. He praises this proceeding as far more valuable and less dangerous than suspension and extension. The latter practice he scarcely notices at all. For caries the only proper treatment is perfect rest in Bonnet's wire splint, though in the later stages he uses apparatus like Taylor's brace, with axillary supports. Suspension and jackets of plaister or of felt are absolutely rejected in the main part of the work; but towards the end comes a small supplemental recantation. In the treatment of lateral curvature, the greatest stress is laid on strengthening the bones by means of plenty of nourishing and appropriate food.

C. B. KEETLEY.

3005. *Roth on the Early Treatment of Flat Foot.*—Mr. Bernard Roth (*Brit. Med. Jour.*, Nov., 1882, p. 989) classifies flat feet into three groups; (*a*) those which can be restored by passive manipulation to their normal shape; (*b*) those in which operative interference is necessary, owing to fibrous ankylosis or osseous deformity of the tarsal bones; (*c*) intermediate cases. It is with those cases in which operative interference is not necessary that Mr. Roth especially deals in his paper, in which he shows that, by wearing properly shaped laced boots, without heels and with felt pads, by persevering daily with exercises in which the muscles inserted into the tarsal bones are brought into play, and by improving the general health of the patient, the pain of flat foot, if present, is speedily relieved, the deformity being nearly always improved in a few weeks.

3006. *Pounds on a Case of Congenital Contraction of the Knee-joints with Double Talipes.*—Mr. Pounds, in the *Lancet*, April 1883, gives an instance of a severe case of deformity. A girl, aged 12, had both knee-joints contracted, the legs being flexed on the thighs almost at right angles; there was also a double talipes varus. The usual method of progression was on 'all fours.' First of all the right leg was operated upon; all tendons that were causing the contraction were cut and the limb put up in plaster of paris for six days, then placed on a back splint at the knee, and a Martin's bandage used to bind down the knee to the splint, so as to bring the limb gradually into its normal position. The left leg was down a month later, and the child now walks a quarter of a mile without stopping; but the limbs give to a certain extent at the knees, so that she is obliged to have some slight support.

3007. *Owen on the Simple Treatment of Congenital Club-Foot.*—Mr. Owen, in the *Lancet*, April 1883, p. 723, contributes a short article on the treatment of congenital club-foot. The most common form is that in which the heel is raised and the sole twisted inwards (talipes equino-varus); and the author states that in many such cases a permanent shortening of the tendon of Achilles is the head and front of the mischief. When this tendon has contracted, as much as the elevation of the os calcis will permit, it can contract still further by effecting a rotation of the bone upon its anterior-posterior axis, the astragalus also participating in the inversion. Reasons for this statement are given; and then Mr. Owen goes on to show that the old plan of treating cases of this description by first dividing the tibial tendons and then the tendo Achillis and securing the foot in a Scarpa's shoe, is altogether unnecessary. His plan of treatment is in many cases only to divide the tendo Achillis, and then to place the foot in a plaster of Paris sock, which needs renewing three or four times, at intervals of about three weeks, taking care to bring the foot gradually into as good a position as possible.

3008. *Smith on some Cases of Lameness from Abnormal Conditions of the Feet.*—Mr. Noble Smith,

in the *Brit. Med. Jour.*, June 1883, p. 1168, continues from page 1112 his notes on cases of lameness from abnormal conditions of the feet, chiefly from contractions of the muscles and fasciæ. The author lays great stress on a very painful and troublesome affection of the great toe, viz., the bending or contraction of that toe outwards from the middle line of the body. This is a very common deformity, and is always maintained and increased by the form in which the modern fashionable boot is made. This deformity is not remedied by the square-toed boot, for the most important qualification of a good boot is that it should allow the phalanges of the great toe to occupy a position in a straight line with the metatarsal bone. When the great toe is turned out, away from the middle line of the body, the ligaments are stretched; the metatarso-phalangeal joint is irritated by unequal pressure, and is very apt to become inflamed; bunion is frequently produced; numerous tendons are distorted, and the use of the toe, as a lever in locomotion, is materially lessened, or entirely destroyed. Mr. Smith points out by diagrams how Meyer's boots are incorrect, and urges that the most important point to remember in making a boot is that the axis of the phalanges of the great toe should be kept in a straight line with the metatarsal bone. Another point to which attention is drawn is that high heels are very injurious, allowing as they do the weight of the body to press the feet too forward in the boot; the anterior part of the foot is widened, power is lost; the muscles of the calf being partially thrown out of use, the calf atrophies, locomotion becomes constrained, and there is also a tendency for the tendon of the tibialis posticus muscle to slip forward out of its groove, for the foot to turn sideways, and for the ankle-joint to be sprained. A description of the deformity known as 'hammer-toes' is given, and a case in which the bands of fascia were divided with success is noted.

3009. *Davy on the Relief of Intractable Club-Foot.*—Mr. Richard Davy, in the *Brit. Med. Jour.*, May 1883, p. 899, gives notes of a lecture on the excision of an osseous wedge at the transverse tarsal joint for the relief of intractable club-foot. A table is drawn up showing the results of twenty-one cases operated on; then a short outline is given of cases suitable for an excision of an osseous wedge. The method of operating has been already described in the *Brit. Med. Jour.*, Oct. 29, 1881, p. 698, and there is little to add since that date. The results of the operation speak for themselves, twenty of the cases out of the twenty-one operated upon having been restored to plantar progression.

RICHARD NEALE, M.D.

3010. *Judson on the Cause of Rotation in Lateral Curvature of the Spine.*—Dr. A. B. Judson explains (*New York Med. Record*, Sept. 30. 1882) how his views of this deformity differ from those of Mr. Shaw. According to the latter, rotation is caused by a change in the form of the articular processes, which disables them from preventing a wide lateral excursion of the anterior part of the vertebral column; while Dr. Judson says that it is caused, under axial pressure, by the fact that the anterior part of the vertebral column is anatomically devoid of impediments to a wide lateral mobility. Dr. Judson further adds that he considers that rotation takes place in spite of, rather than in consequence of, the yielding of the articular processes. 'According to Mr. Shaw's view, rotation,' writes Dr. Judson, 'is the result of the yielding of the articular processes on that side of the column which is directed toward the concavity of the curvature.' Herein lies a fallacy; for the yielding of the superior articular process of one, say the ninth dorsal vertebra, while it allowed the vertebra above to rotate forwards from the process, would also allow this ninth dorsal vertebra to rotate in the reverse direction. And, again, as the inferior articular processes are subject to pressure and absorption as well as the superior, the influence of the former would allow rotation in an opposite direction to that induced by the latter; so that each affected vertebra 'must at the same time rotate towards the right and towards the left—an evident impossibility.'

E. NOBLE SMITH.

PHYSIOLOGY.

RECENT PAPERS.

3011. VEJAS.—Note on the Anatomy and Physiology of the Spinal Ganglia. (*Centralbl. für die Med. Wiss.*, No. 18, 1884.)

3012. DE LA CELLE DE CHATEAUBOURG.—Physiological Albuminuria. (*Centralbl. für die Med. Wiss.*, No. 16, 1884.)

3013. SETCHENOFF, J. M., Prof.—A Note on the Renal Circulation. (*Vratch*, 1883, No. 8, p. 113.)

3011. *Vejas on the Anatomy and Physiology of the Spinal Ganglia.*—In regard to the physiological functions of the intervertebral ganglia, the results obtained by Vejas (*Centralbl. für die Med. Wiss.*, No. 18, 1884) from his experiments upon animals differ in many points from those of Waller. Waller's researches seem to show that, after section of the sensory root, only the central portion (the end in connection with the spinal cord) degenerated, while after section of a motor root only the peripheral fibres (cut off from the cord) degenerated. Waller hence presumes that there is a trophic centre for the motor fibres in the cord, and, as to the sensory fibres, that each intervertebral ganglion exerts a trophic influence, both towards the centre and the periphery. Vejas observed, on the other hand, that, after dividing either the sensory or motor roots, the portions left in connection with the spinal cord wasted away, and at the ganglion itself no persistence of sensory fibres with central direction was to be found. Both motor and sensory fibres were wanting from the ganglion, while the ganglion-cells remained quite normal, and from the ganglion a thin white nerve took a peripheral direction. Finally, the ganglion itself wasted, after section of its peripheral fibres. From these results, and from evidence of the unipolarity of the spinal ganglion-cells, Vejas contends against Waller's theory. Vejas regards the nerve-fibres coursing from the ganglion peripherally, which persist after section of the roots, as a special bundle of fibres, which take origin from the ganglion-cells of the spinal cord, and are perhaps endowed with some functions as yet unknown.

3012. *De la Celle de Chateaubourg on Physiological Albuminuria.*—Some recent researches on this subject are given in the *Centralbl. für die Med. Wiss.*, No. 16, 1884. The above observer found albuminuria extremely common in healthy people. Out of 701 persons, 592 were found with it—*i.e.* 84 per cent. Bodily fatigue was of great influence. In 120 soldiers, examined in the early morning,

albuminuria was found in 92—*i.e.* in 76 per cent.; but after an exhausting march the figures rose to 90 per cent. The quantity of excreted albumen was also increased. Similarly, severe mental work increased the albumen excretion. Amongst fifty young men preparing for examinations albuminuria was found in forty-six (92 per cent.), and in no inconsiderable quantity. But most striking is the influence of the cold bath: fifty-three fasting, but unfatigued, soldiers each showed albuminuria after a cold bath of about five minutes. On the other hand, the author differs from Senator, Rendall, and others, in not being able to attribute any distinct influence to the taking of food. Amongst 142 children, aged from 4 to 14 years, albumen was found 111 times (78 per cent.), but mostly in smaller quantity than in adults. E. J. EDWARDES, M.D.

3013. *Setchenoff on the Renal Circulation.*—In the *Vratch*, No. 8, 1883, p. 113, Professor J. M. Setchenoff draws attention to the fact that the blood enters from the aorta into the renal arteries under a great pressure, in consequence of the latter vessels commencing near from the origin of the aorta; on the other hand, the blood flows out of the renal veins under a comparatively low pressure, in consequence of these vessels being near to the ostium of the inferior vena cava. The author states that the chief regulator of the renal circulation is a comparatively great and constant difference between the blood-tension in the abdominal aorta and that in the abdominal part of the inferior cava.

V. IDELSON, M.D.

ANATOMY.

RECENT PAPERS.

3014. RIEDER. On Gaertner's Duct in the Human Female. (Virchow's *Archiv*, Vol. xcvi., Part I.; new series, Vol. vi., Part I.)

3015. SCHÜLLER, MAX.—A Contribution to the Anatomy of the Female Urethra. (*Festschrift für Prof. Schultze*, Berlin, 1883.)

3014. *Rieder on Gaertner's Duct.*—Rieder, of Basle, has found traces of the duct of Gaertner in almost every third specimen of the internal organs of the human female that he has examined. It could be traced, even in old age, either as a tube of epithelium surrounded by muscular fibres, or as a bundle of muscular tissue without epithelium. It ran downwards along the muscular substance of the uterus and the muscular layer of the vaginal wall, in which it was situated laterally and somewhat anteriorly, and was more frequent on the right than on the left side. The epithelial lining of the duct was found to be generally double, but in exceptional cases single; the cells were cylindrical and of medium height. This lining was surrounded by a layer of connective tissue, itself surrounded by a muscular coat, of plain fibres running longitudinally with an annular series of fibres separating those running in the reverse direction into two sets. Rieder believes that the duct represents, in its uppermost part, the vas deferens, and in its course through the cervix uteri, where dilatations can be found, the ampulla and the vesicula seminalis. The portion lying in the vaginal wall represents the ejaculatory duct in the male. He failed to trace Gaertner's duct in the lower part of the vagina, nor could he ever find its orifice; and he assigns the regular and constant atrophy of this part of the duct to the development of the urethro-vaginal septum. Rieder does not doubt that a form of vaginal cyst may develop from this duct, probably as a lateral process, rather than as a dilatation of a portion of the duct itself through obstruction above and below.

3015. *Schüller on the Urethral Ducts in the Female Urethra.*—Skene of Brooklyn, Kocks, and Kleinwächter, have all described the pair of ducts found in the posterior part of the female urethra, and Kocks believes them to be the terminal portion of Gaertner's ducts. Dr. Max Schüller has made a series of dissections, and finds that the ducts are almost constant. They may be found in the fœtus, in children, in adults, and in old women eighty years of age. The orifices of the ducts lie on the wall of the urethral meatus on each side of the middle line, posteriorly; the margins of the orifices are elevated, and can thus be distinguished from the lacunæ and depressions of the mucous membrane that abound near the meatus. A sound, from the calibre of from 1 to 4 millimètres, can be passed up one of the ducts for the distance of from one-fifth of an inch to an inch. When they become inflamed, there is a discharge from the meatus, without any scalding during micturition. On transverse section the ducts appear as slits; the higher up the section is made, the more irregular is their contour, and each duct ends as a gland made up of a few short tubules. There is erectile tissue under the squamous epithelium that lines the orifices of the ducts, and muscular fibres in their walls. After the climacteric, all the histological elements of the ducts and the glands in which they terminate tend to wither. Dr. Max Schüller finds that the ducts are simply glandular structures, developed together with the other and smaller glands of the urethra mucous membrane. He cannot trace the ducts upwards as continuations of the ducts of Gaertner.

ALBAN DORAN.

REVIEWS.

ARTICLE 3016.

Ueber die Drehnungen der Hand. (On the Rotation of the Hand.) By DR. JACOB HEIBERG. Wien und Leipsig: Urban & Schwarzenberg. 1884.

A VALUABLE and original paper on the Mechanism of Rotation of the Hand has been published by Dr. Heiberg, of Christiania, which must modify materially our received opinions of the movements taking place between the radius and ulna. In England we have accepted rather implicitly the simple mechanical explanation of Ward, but its very simplicity is a strong argument against its correctness. Human mechanics are almost universally of a very complicated character, and the simple rotation of the radius round the ulna at its lower end and round its own axis at the upper end is too pretty and simple to stand the test of careful inquiry. As in many other joints, the axis of rotation itself moves in a definite line, or, more correctly, in a definite curve, so that the movement of the bones in rotation of the hand is a complex double rotation. One is forcibly reminded of the shifting axis of rotation exhibited at the shoulder, which has been likened to the action of the sliding

seat in rowing, and of the complicated double screw action found at the knee-joint instead of the apparently simple hinge-movement. Similarly, the hinge-joint action of the elbow is found to be rather that of a large and anything but simple screw. A careful study of the mechanism of all the joints would well repay the observer ; and both anatomists and surgeons have a large field here, which has been opened and trodden on by old and recent workers.

In the present monograph Professor Heiberg, after giving very fully extracts from as many as fifty-four authors, and pointing out how they do not agree with one another or satisfactorily explain the movements he notices in the radio-ulnar articulations, first of all examines what would be the position of the usually accepted axis of rotation, and finds that a rod passed through the centre of the head of the radius vertically downwards through a point near the styloid process of the ulna would, if continued, pass out at the base of the little finger on the inner side of the hand. The observation, however, seems open to objections, inasmuch as it is made upon a model of the bones, and the hand is laid out flat. The unsteadiness of the hand in this position is obviously unfitting the careful examination of the axes of rotation. But this part of the inquiry is only to show the incorrectness of accepted views, and the impossibility of obtaining sufficient rotations round a fixed axis to allow ordinary pronation and supination.

In Chapter VI. he examines carefully the amount of rotation of the radius when the different fingers are fixed, and rotation made to take place round their axes, and the extent of rotation of a rod fixed into the olecranon which indicates the movement of the ulna below, is also given. The following table shows the results obtained.

	Chord of Rotation of Radius.	Chord of Rotation of the Elongated Olecranon.
Second finger ...	7·0 C.M.	2·0 C.M.
Third ,, ...	7·0 ,,	1·5 ,,
Fourth ,, ...	7·5 ,,	1·0 ,,
Fifth ,, ...	8·3 ,,	·8 ,,
Ulna fixed	9·4 ,,	—

He next removes the hand, and allows each styloid process to make its own mark with ink upon a fixed paper while rotating the forearm. Two curved lines are produced, running in opposite directions : that for the radius being of large extent, that for the ulna being smaller and in an opposite direction. By elongating the ulna by means of a brass rod fixed into the olecranon, he is able to show the rotation occurring in that bone more fully, and he is careful to make the extent of elongation equal to the distance from the lower end of the ulna to the upper radio-ulnar articulation. The upper end of this rod has a brush attached to it, which makes the exact reverse of the movement occurring below. The rod he calls an elongated olecranon. From these observations on the forearm when the hand has been removed, he gives a diagram of what he believes to be the movements of the two bones ; and he proceeds to confirm these views by further observations on the living subject, and on carefully prepared models.

On the living subject he fixes a rod, which represents an elongated olecranon. The upper end of this rod describes a curve during the rotation of the hand, and this curve is the exact reverse of the movement occurring at the lower end of the ulna. And this corresponds exactly with what he already has observed upon the dead subject when the hand was removed.

It is difficult to fix the axis of rotation satisfactorily with a living hand ; he therefore examines the amount of rotation occurring when a borer is placed in the hand between the different fingers, and he finds that, when it is placed between the third and fourth fingers, the axis of rotation is the most natural.

He now examines further upon the dead subject, and one of the most important observations he makes is that when a brass rod is made to pass along the axis of the radius, and that bone is therefore fixed, the ulna can be made to rotate round it at its lower end to the extent of 80°. He concludes the chapter with the following summary.

1. The ulna rotates with the rotation of the forearm.

2. This rotation is regular and definite.

3. The axis of the rotation of the ulna is situated about 1·2 centimètres from the styloid process of the ulna. The lower longer end of the bone moves in the plane of a longer cone, and the upper short end or olecranon moves in a plane of another but opposite cone. The two *cones* formed by these arms have an intermediate common point in the sigmoid fossa, so that the movement at the lower end can be more distinctly observed by carefully noting that of the upper by means of an elongated olecranon, for the arm of the lever is so much the longer.

4. In this scheme, the generally accepted rotation of the radius round an axis passing through the head of the radius and the lower end of the ulna is to be noticed, but there is at the same time a change of position of the styloid process of the ulna in an opposite direction.

5. The rotation of the forearm is thus attended with a vicarious function of both bones, which both rotate ; the movement of the radius is certainly the greater, but the ulna can rotate alone.

In Chapter VII. he examines the amount of separation possible in the joint-surfaces of the ulna and humerus, and shows by a section through the coronoid process of the ulna, and the trochlea of the humerus, that an appreciable space exists at the inner side of the joint.

Next he examines carefully the shape of the head of the radius, and shows that, so far from its being a true circle, it forms a distinct ellipse. In the living subject, this can be felt with the right hand if the left arm be placed in full supination. The head of the radius can be felt to project under the finger. This is owing to the ellipse-shape of the bone ; for, if it were truly circular, no projection would be felt. In a thin person, this projection can be seen.

A diagram is given of a section of the lower end of the ulna, and here the shape is more truly part of a circle, the centre of which would correspond with the attachment of the triangular ligament.

In Chapter VIII. he describes the movements, as they are traced from models carefully prepared, of the bones and hand.

In Chapter IX. he examines the action of the muscles in producing these movements, and attributes to the anconeus the movement of the ulna. The fibres do not interfere with the conical movement at all. The lower fibres of the muscle are contracted during pronation and the upper during supination. 'Against this partial action he maintains we cannot argue, for our arrangement of individual muscles is, as we know, not physiological.'

By one of the diagrams, he shows how the ulna is drawn inwards at its lower end during supination, while the rod that constitutes the elongated olecranon is pulled outwards, and in the next figure the exact reverse of these movements is shown to occur in pronation.

The pronator quadratus has, in his opinion, but little to do with pronation; but its function is rather to hold the bones together, while they are tending to be separated by the shape of the articular surfaces.

In Chapter X. he examines the effect of the mechanism as shown during certain actions, such as drawing a cork, boring holes, and he examines excessive movements of which acrobats are capable.

We recommend this pamphlet to the careful notice of anatomists and surgeons, and trust to see the results of Professor Heiberg's observations incorporated in our anatomical and surgical text-books.

W. W. WAGSTAFFE.

ARTICLE 3017.

On Insanity and Nervous Disorders peculiar to Women in some of their Medical and Medico-Legal Aspects. By THOMAS MORE MADDEN, M.D., &c. Pamphlet, pp. 23. Second edition. Dublin. Fannin & Co. 1884.

THE subject dealt with in this pamphlet is one of great interest; and for this reason the pamphlet before us may occupy some attention.

Dr. More Madden's purpose 'was to call attention to the increasing prevalence of mental and nervous disorders, especially amongst women, and to describe the character, causes, and treatment of these affections. Secondly, to point out that many persons who are not mad, but who are merely suffering from the reflex nervous consequences of unrecognised and curable utero-ovarian disease, are improperly confined in lunatic asylums. And, thirdly, to suggest as remedy for this abuse—1. That in future, certificates of insanity should be given only by specially appointed medical inspectors of lunatics. 2. That private lunatic asylums should be abolished as such. 3. That all patients in lunatic asylums should be treated by extern or visiting physicians.'

Sixteen pages, not very closely printed, suffice for the accomplishment of this rather extensive programme. We will notice a few points very briefly.

Dr. More Madden's explanation of 'the increasing prevalence of mental and nervous disorders, especially amongst women,' is worthy of note. 'The greater frequency of cerebro-nervous disorders met with in modern practice amongst women corresponds exactly with the increasing proportion of those gynæcological complaints which have come into such prominence of late years. This results from the complex organisation and functional importance of the female reproductive system, the predominant influence of which is manifest in every vital action in health and disease, from the dawn of puberty until the termination of the period when utero-gestation is possible.' Has, then, 'the complex organisation of the female reproductive system' become more complex, or has 'the functional importance' become more important? Otherwise it is not easy to see how the 'greater frequency of cerebro-nervous diseases' 'results' from it; unless, indeed, the growing study of gynæcology be the increasing element of causation. This explanation, though suggested by Dr. More Madden's presentation of the facts, has nothing else to recommend it. In regard to epilepsy, the author 'can hardly call to mind a single case of any form of epilepsy in a woman in which there was not some derangement of her ovarian health.' Here, as elsewhere, he appears to lose sight of the fact that woman does not consist of uterus and ovaries only.

We now come to the improper confinement in lunatic asylums of many persons 'who are not mad, but who are merely suffering from the reflex nervous consequences of unrecognised and curable utero-ovarian disease.' Whether there is truth in this charge, is a question that cannot be examined here; but it may be stated that in any case Dr. More Madden does not substantiate it. The only case at all relevant to the point is that of a lady 'about forty-six years of age, with delusions, religious despondency, and suicidal tendencies.' After two years in a private asylum, 'her mental condition was not better than when she entered the asylum, and her physical health was much worse. It was then suggested by one of her family that as she had formerly been under treatment for some uterine disease, a gynæcologist should again see her. On examination I found considerable tumefaction and evident tenderness about the left ovary. The uterine cavity was normal in size, the cervix elongated and cartilaginous, and the os surrounded with a ring of deep erosion. The patient was emaciated and cachectic-looking. Her breath was fœtid, tongue coated, and pulse quick and weak.' The patient was removed from the asylum. 'After some months the uterine and ovarian irritation yielded to treatment, and at the same time the mental and nervous disturbance also gradually subsided, and the patient was again enabled to resume her former place in society.' As this is the only case related to prove that 'many persons who are not mad' 'are improperly confined in lunatic asylums,' we may assume that Dr. More Madden considered this lady sane in spite of her 'delusions, religious despondency, and suicidal tendencies.' A peculiarity in her physical condition was that though the 'uterine cavity was normal in size,' the cervix was 'elongated.' The case, in fact, appears to be altogether unique, and it could scarcely be expected to do less than recover.

The author complains that the 'facility with which any person may legally be confined as a lunatic' is open to great abuse. He says, 'I myself have had personal cognisance of this abuse.' This may account for Dr. More Madden's rather disjointed remarks; and it certainly excuses them.

The remedy for the abuse established in the way just shown is threefold. The first recommendation is that 'No person should under any circumstances be confined in a lunatic asylum, public or private, save on the warrant or certificate of two official and responsible medical inspectors of lunatics; and in the case of supposed female lunatics, at least one of these inspectors should be an expert who had some *practical experience* of the special disorders which may in women simulate insanity.' 'Secondly, private asylums should be entirely abolished as such, and made first or second class public institutions under the direct control of the Commissioners in Lunacy.' The third suggestion is, that 'some legal provision should be made for the appointment to all female asylums of special medical visitors who have that actual experience in gynæcological practice

which may enable them to recognise and treat these cases. Moreover, as the object of the suggested appointment is to lessen the number of persons unnecessarily confined as lunatics, those thus nominated should be entirely independent in their curative treatment of such patients.'

That there is room for improvement in the law of lunacy is beyond question ; and there is ground for expecting that before long private asylums as such will be abolished ; and perhaps that certificates of insanity will be valid only from salaried officials. The suggestion to have extern or visiting gynæcological physicians to asylums 'entirely independent in their curative treatment' does not call for discussionf until at least a second person can be found to uphold so unpractical a proposal. Dr. More Madden overestimates the ignorance of all medical men except gynæcologists in regard to the uterus and ovaries. Should it, however, be thought advisable that more knowledge of gynæcology be brought to bear on the insanity of women, it would hardly be well to tolerate two specialists 'entirely independent in their curative treatment.' The only proper course would be to insist on the requisite knowledge in one responsible person ; and why he should be an 'extern or visiting' physician, is not quite clear.

WILLIAM R. HUGGARD, M.D.

ARTICLE 3018.

Clinical Illustrations of Puerperal Insanity. By A. CAMPBELL CLARK, M.B.Edin. Glasgow: Maclure and Son. 1884.

THIS pamphlet is a reprint, with additions, of papers that appeared in the second volume of the *Lancet* for 1883. Puerperal insanity is to a large extent treated at home without being sent to an asylum ; and the meagre literature of the subject makes it desirable that general practitioners should give a fuller account of the valuable material that falls in their way.

Dr. Clark records in full the history of twenty cases after admission to the institution of which he is superintendent, the Glasgow District Asylum, Bothwell.

An analysis of the cases brings out some interesting results. A few of these may be noticed. In those insane for the first time, 7 were primiparæ, 9 multiparæ. There appears to be considerable tendency to recurrence of the insanity, though not necessarily in the puerperal form. The attack began in 13 cases within a week after labour ; in 4 cases within a fortnight. One case became insane in the second or third month. In 6 cases albumen was present, and in 6 cases the urine was normal. Homicidal and suicidal tendencies were frequent. Delusions of identity were common. Hallucinations were probably present in every case ; those of sight and hearing were the most usual. An interesting point, not hitherto noted in puerperal insanity, was the frequent occurrence of pyromania. A very remarkable circumstance was the very frequent association of hallucinations of smell with this symptom. Fondness for stimulants was an almost invariable concomitant of the disease in Dr. Clark's cases. Many of the maniacal cases bore a resemblance to delirium tremens. Profane and indecent speech and behaviour were by no means frequently noticed. The results of treatment are as follows. 'Sixteen cases have been treated to a termination. Of these, 12 recovered, 3 died, and 1 passed into mild dementia. One is hopelessly chronic, having been insane over twenty years. Three more are still under treatment, but only one is making any appreciable progress towards recovery. Duration of asylum residence in those discharged recovered averaged 167 days : maximum, 359 ; minimum, 52.'

The tendency of the complications of puerperal insanity to prove rapidly fatal is pointed out. The importance of being alive to these dangers is all the greater because the evidence of them is apt to be masked by the mental symptoms. Septicæmia is common, and the frequency of pelvic and lung affections is striking.

This essay is an useful contribution to the clinical history of the disease. It is somewhat marred, however, by several clerical and typographical errors.

WILLIAM R. HUGGARD, M.D.

ARTICLE 3019.

Female Education from a Physiological Point of View. A Lecture. By JOHN THORBURN, M.D., Professor of Obstetric Medicine, Victoria University, Manchester. Manchester : J. E. Cornish. 1884.

DR. THORBURN advocates, as much as anyone, the higher education of women ; but in common with most physicians of special experience in regard to the subject, he protests vigorously against the mode in which it is carried out. The physiology of menstruation is lost sight of ; and zealous but thoughtless educators assume that women even during their menstrual period are as capable of continuous mental labour as men are. The consequence is a breakdown in one direction or in another. 'The more chronic consequences are known to every observant physician, and there are few who have not seen bright careers of mental work and usefulness cut short, never to be resumed, after a few days of hard mental strain during a menstrual period. It cannot, therefore, be too strongly insisted on that, with the young and delicate, at any rate, and to some extent with all women, the period of menstruation should be a period of comparative repose, mental and bodily, but especially mental. Adult women have quite sufficient tact to insure this for themselves without unnecessary parade, if its importance is brought before them ; and it is for those who organise the work of young women to give at least a chance for the employment of such tact.' Dr. Thorburn believes that, by allowing a period of repose for menstruation, increased vigour would be gained for the periods of activity. 'The hardest question to solve will be in reference to the fixed times at which all examinations must be held under the present system.' The consideration, however, of this question is postponed until women have to some extent bestirred themselves in the matter.

In regard to primary education, the author makes some excellent remarks. 'One thing is this, that the homes of our artisan class are so overcrowded that the kitchen, the washhouse, the sitting-room, and the nursery, to say nothing of the study, must be combined in one, so that no child but an infant prodigy could possibly devote itself to real study of the most elementary kind—to home lessons—unless father and mother, nurse, cook, washerwoman, and babies were all prepared to render assistance, at least of a negative character.' 'We have been told that the over-education cry is wholly erroneous, because in certain cases, thoroughly investigated,

pulmonary disease or tubercular meningitis, or other similar pathological phenomena were discovered after death. The press has too often been misled in this way; but what, in the name of wonder, did the investigators expect to find or not to find? A child who is killed by over-education, and the theoretical possibility of such a case can be denied by no one, does not exhibit after death a brain filled with picture-alphabets or logarithmal tables or algebraical formulæ; and if his digestive organs mainly suffer, leading to tuberculosis of brain, lungs, or peritoneum, it is tubercle we shall find, and not scraps of copy-books and primers.'

The hope may be cherished that this lecture will have a wide circulation, and that it will lead to some amendment in the methods of carrying out the higher education of women.

WILLIAM R. HUGGARD, M.D.

ARTICLE 3020.

Revue Médicale et Scientifique d'Hydrologie et de Climatologie Pyrénéennes. Par F. GARRIGOU (Luchon) et E. DOUHOUREAU (Cauterets), &c Nos. 1–12. Toulouse: 1884.

THIS new Pyrenean balneological journal discourses, not only about Pyrenean stations, but about all that is doing in the hydrological world in Latin countries, *i.e.* in France, Spain, and Italy: there is little or nothing about Germany. There is much information about Spanish baths, in the use of which there has been quite a revival and great improvement. There are full reports of the French and of the Spanish hydrological societies. Spanish views on arthritic, herpetic, and strumous diatheses seem to be very much a mere reflex of the French. We can recommend this journal to all who are interested in the subjects of which it treats: but, unfortunately, there is not much field in England for the sale of such a publication. The following enumeration of some of the subjects treated in the journal will at once show its general scope, and indicate the questions that are most interesting in the south of France at the present moment; the export of mineral waters, the pulverisation of sulphur-waters, the mud-baths of Odessa, the system of local douches at Nèris, sulphur-waters in arthritic complaints and in pulmonary hæmorrhage, Eaux Bonnes, prolonged baths for infants. Further, we have papers on the causes of failure and of success in the export of mineral waters, on local douches at Luxeuil, an account of Panticosa, on the value of nitrogenous waters, on air of mountain and of sea, on syphilis at Luchon, Spanish views of its treatment by mineral waters, an elaborate study of *glairine* or *baregine*, the organic deposits from various thermal waters.

We extract a few words from this paper, which, among other things, states the curious fact that the *Protococcus nivalis*, which gives a pink colour occasionally to snow, is sometimes found in these hot waters. The following is a summary of Dr. Joly's results.

1. The *glairine* of the chemists, which is to be found in almost all the Pyrenean sulphur waters, is a very complex substance, which contains as essential constituents the detritus of a quantity of vegetable and still more of lower animal organisms, the list of which amounts to about forty species, to which Dr. Joly adds, as new, an *annelide* and a small *crustacean*.

2. The nitrogenous organised matter, which exists in the Pyrenean waters, is attributable, certainly to a great extent, to the ultimate decomposition of animal and vegetable matters, derived from organic forms which have lived in the waters.

3. The *Sulphuraria* is, in its living state, very different from the *Glairine*, but its detritus forms a large proportion of that substance.

4. *Sulphuraria* is probably an Oscillaria, and would, therefore, belong to the animal kingdom.

J. MACPHERSON, M.D.

NOTES ON BOOKS.

ARTICLE 3021.

1. *Die Nauheimer Sprudel, und Sprudelstrombäder.* Von DR. AUGUST SCHOTT and DR. THEODOR SCHOTT, in Nauheim. *Berlin. Klin. Wochenschr.*, 1884, No. 19.
2. *Die Veränderung der Pulscurven in der pneumatischer Kammer.* Von DR. G. v. LIEBIG, in Reichenhall. *Deutsch. Med. Wochenschr.*, 1884, No. 19.
3. *Hubertus-Bad*: card 1883; *Tarasp-Schuls*: card 1884.

1. THE virtues of the Nauheim waters have long been known, as those of a salt bath; but it is not sufficiently recognised that it is also a very powerful gas bath. This has been amply proved by recent analysis, and it is now certain that Nauheim can supply baths of still water, quite equal in strength to those of the strongest steel baths, and for stream baths superior to all others in the amount of carbonic acid. Owing to the natural temperature of the Nauheim springs, artificial heating is not required. In many cases the ordinary Nauheim waters are sufficient, but in some the stronger gas baths are necessary.

The newly procured springs are of a temperature of 88°, but they are so full of gas that there is only the slightest feeling of cold just on entering them. Very soon a distinct feeling of warmth and pricking of the skin sets in; the bubbles of gas adhere to it, and the skin becomes red; and it is possible to keep up this stimulation, by the addition of another water very highly charged with carbonic acid.

Stream baths are decidedly more stimulating than those of still water, and in anæmia the gradual increase of stimulation is often important. Very advanced anæmia bears the simpler salt baths better than the gas ones; gaseous baths strengthen weak hearts when there is slight valvular insufficiency, but must not be ordered when it is considerable.

It is generally desirable in the course of treatment to descend to lower temperatures; these are borne by making the water more stimulating to the skin, first, by increasing the amount of salt, and further on, that of the gas.

The quantity of gas in the Nauheim waters makes it possible for rheumatic patients to bathe at a lower temperature in them than in other waters.

The presence of much dyspepsia, or of febrile or subfebrile temperature, are contra-indications to the use of the baths.

The ordinary salt baths are the best adapted for the treatment of scrofula; the gaseous ones are not required for it.

About one-third of the cases of tabes dorsalis improved under the use of the sprudel baths, and had some diminution of ataxy, but there were other cases in which the gaseous baths produced lancinating pains, and the gas-free baths were had recourse to.

For functional nervous diseases the sprudel was chiefly used, asssisted by careful gymnastic and psychical treatment.

On the whole, it is certain that the stream bath is more active in its operation than the still one; the last, therefore, is usually given in the commencement, and the other further on in the cure.

As to the relative effects on the skin of salt and of gas baths, it is found that the excitement of the skin and of the nervous system by the first is more permanent. Although it is ascertained that the carbonic acid of gaseous baths penetrates to the corium, and that it is a more active stimulant than salt for the moment; yet its effects are not permanent, and pass off much sooner.

To sum up, brine baths can be had at Nauheim, containing any amount of salt or any amount of carbonic acid that may be considered desirable.

2. Dr. von Liebig continues his laborious observations on the effects of the pressure in the pneumatic chambers at Reichenhall. He says that for a long time there were no accurate statistics on the acceleration of the pulse by diminished pressure, or at higher elevations, till Mermond's observations in 1878 supplied the deficiency. His experiments showed that there was a difference of three beats in the 100, between the elevation of 343 and of 1,100 metres, while Vivenot found that, in the pneumatic chamber with the mercury at 32 centimetres pressure, there was a retardation of three beats in the 100.

Liebig's experiments have shown him that the changes of pulse in pneumatic chambers are not uniform, but depend a good deal on the condition of the patient; and the general result has been that the expansion and contraction of arteries, and the form of pulse consequent thereon, were in no degree influenced by the amount of pressure in the pneumatic chamber, and that there was no congestion of the arterial system. Liebig thinks it probable, that any retardation of the beats is caused by the general surface-pressure, and by increased friction of blood in the arteries.

The therapeutically important retardation of the pulse, according to Vivenot's repeated observations stands in no relation to the simultaneous retardation of the respiration in pneumatic chambers. On the whole, although cases of extensive valvular disease must remain excluded from pneumatic treatment, these results are rather encouraging for its employment in slighter degrees of it.

3. Those who can be satisfied with an air cure, where there are no snowy peaks in sight, and away from a crowd of their countrymen, might do worse than go to Thale or to Harzburg, at the two ends of the Hartz Mountains. At the former of these places there are most comfortable hotels, besides the Hubertus Bad, lying in the mouth of the magnificent gorge through which the Bode flows. The water, like that at Harzburg, is salt, and there are comfortable baths, though on a smaller scale than those of Harzburg, which place also is well provided with hotels. The two places are both amid beautiful scenery of rather opposite characters, and the salt-baths which are available are decidedly an addition to the resources of the places.

For those who choose to go further from home, and to greater elevation, there are the excellent waters of Schuls-Tarasp, in the lower Engadine, at the height of 4,000 feet. The waters there are most potent. They are cold, like those of Marienbad, and they are resorted to by the same class of patients who use the warm Carlsbad waters. For many patients, the Alpine climate is a great recommendation. Tarasp is about as accessible as St. Moritz; even after the opening of the Vor Arlberg tunnel the drive from Landeck will take eight hours; but this is not so long as the drive from Coire to St. Moritz.

Unusually few communications from German baths have reached us this season.

J. Macpherson, M.D.

Article 3022.

1. *Du Catarrhe Nasale, &c., aux Eaux du Mont-Dore.* Par le Dr. Em. Emond. Pp. 20. Paris: 1884.
2. *Chronic Albuminuria at La Bourboule.* By A. Dauzat, M.D. Pp. 15.
3. *Recherches sur des Substructions d'un Etablissement Thermal Gallo-Romain à Royat.* Par le Dr. A. Petit. Pp. 20. Clermont Ferrand: 1884.
4. *Seize Années de Pratique à Contrexeville.* Par le Dr. Debout d'Estrées. Première Partie. Paris: 1884, pp. 44.
5. *Aix-les-Bains, &c.* By Dr. Brachet. Pp. 174. London: 1884.
6. *Brides-les-Bains & Salins-Montiers.*—By Dr. P. Delastre. Pp. 30. London: 1884.

The first three of these treatises refer to the baths of Auvergne, with which the English have only of late years become familiar. There is something of novelty in their use, and though these waters are not to be despised, they owe a good deal of their present popularity to that cause. The two newer ones can only be considered as being in course of development.

1. The subject of Dr. Emond's treatise of this season is the cure of obstinate nasal catarrh, with ozæna, with more or less ulceration and formation of crusts on the mucous membrane, which indicates usually a scrofulous, but some times an arthritic, diathesis. Such affections he has found common in natives of cold countries, as England and Scotland. This affection is treated constitutionally by the use of the Mont Dore waters, but more specially by local irrigation with them. This is effected by the use of an India-rubber tube. It requires a little practice to become accustomed to its use, and headaches and even syncope have sometimes been provoked by the water penetrating the frontal sinuses. The process cannot be continued for more than fifteen minutes without fatiguing the patient. Dr. Emond gives the details of twelve cases treated successfully in this way. We may add, that we are glad to learn that there is a prospect of the hotel accommodation at Mont Dore being improved. At present, it is far inferior to that of the newer statios of Bourboule and Royat.

2. La Bourboule has now become a well-known bath, and has waters of undoubted value, whether that be attributable to the action of arsenic or not. Like all new waters, it is probable that they are overrated at present, but their actual worth will

after a time be ascertained. Dr. Dauzat seems to prove rather too much, when he says that every one of the patients under his care, labouring under certain affections, derived benefit from the waters of La Bourboule. He ventures to believe that those results were not merely fortuitous.

3. Dr. Petit, whose excellent guides to Royat we have noticed before now, contributes a very interesting account of the recent excavation of the old Roman baths at that place. Those who are interested in the subject, should look at the model of the recent excavations at Bath in the Health Exhibition, and will thus see (as Dr. Petit remarked when he observed the model) how the great Roman nation worked on the same lines, whether in Algiers, or in France, or in England. Wherever the Romans found warm waters, there they constructed their baths; and indeed a villa is never exhumed, without discovering hypocausts and arrangements for baths. Dr. Petit has compiled very excellent maps, not only of the mineral waters of Auvergne, but also of those of the whole of France.

4. Dr. Debout d'Estrées has been engaged in some experiments on the action of lime-waters, the general result of which has been, to show that they produce muscular contractility. He finds that the Contrexeville waters strongly stimulate the vesical and intestinal contractility. This explains how they have an expulsive power over gravel, and how they act as distinct aperients, although containing but a small amount of purgative salts.

This contractile power explains the great success obtained in the treatment of incontinence of urine in the young with Contrexeville water, even when employed away from the source. The waters have been used also in diabetes, and the results are believed to show—1, that their efficacy in diabetes is undoubted; 2, that this is explained by the elimination of uric acid, which was always found to coincide with the diminution of glycosis during the cure. These facts support the theory of Marchal de Calvi as to gout and diabetes both being expressions of the uric acid diathesis.

The remarks on urinary calculi are somewhat controversial, but amount to this; that no one with a stone, not capable of passing through the urethra, should be sent to Contrexeville. He contests the view of one of his colleagues, that a previous use of the mineral waters must be necessarily very dangerous in case of an operation being required.

The paper concludes with the remark, that the waters continue to be used with success in hepatic colic and gall-stones.

5. Dr. Brachet adds another to our ample list of guide-books to Aix-les-Bains, which is now wonderfully popular with the English, and which doubtless has many things to recommend it. The work essentially resembles that of the late Dr. Bertier, which is now seven years old. The book is a convenient guide to Aix and its neighbourhood, and will be useful to visitors. We doubt, however, whether Dr. Brachet has been able to steer clear of the difficulties which attend the attempt, to address his 'colleagues' and 'tourists' in the same book. Surely many of the medical details are not suited for tourists, though his medical friends may like to read them.

6. This is another invitation to Brides and Salins—places to which we have repeatedly called attention. The little essay seems to be well and judiciously written. These waters are undoubtedly the best chloride of sodium waters in France, and by all accounts the Savoy valleys are very attractive.

J. MACPHERSON, M.D.

ARTICLE 3023.

The Health of the Senses. By H. MACNAUGHTON JONES, M.D., F.R.C.S.I. & Ed. Longmans & Co. 1884.

THIS little work is written, as the author tells us in his preface, for the use of the public. It consists mainly of practical instructions for the preservation of the organs of special sense, of illustrations of the organs themselves (accompanied in some instances by a brief account of their structure), and of the description of numerous instruments and appliances, many of which are figured in the text. But in addition the book contains remarks or short essays on various other subjects, such as the voice, diet, the use and abuse of alcohol and tobacco, competitive examinations, the admission of women to the medical profession, &c. An appendix containing a list of British and foreign spas and health-resorts completes the volume. The style of the work renders it easy reading, and it undoubtedly contains many truths which should be brought home to the many.

E. CRESSWELL BABER, M.B.

MISCELLANY.

SCARLET FEVER BY POST.—In the *Medical and Surgical Reporter*, March 1, 1884, a case is narrated where it seems almost certain that scarlet fever was transmitted by means of a letter. The mother of a family received a letter, containing a photograph from her brother, with the news that they had just lost a child from scarlet fever. The letter and photograph were handled by all the children, and seven days afterwards one of these children had scarlet fever. No other cases had been in the neighbourhood for months, and the children had not been away from their home for two months previously.

OVARIOTOMY IN COWS INCREASING THE SUPPLY OF MILK.—In the *Med. Times and Gazette*, May 1884, p. 702, an article appears on the difficulties which attend the securing and maintaining a regular supply of pure fresh cow's milk. In America an attempt has been made to show that a cow will yield better milk, and give a steady supply all the year round if the ovaries be removed. The operation is not a difficult one, and the beast is said to enjoy it after the first incision is made, and especially while the hand is searching for the ovary. An incision is made in the left flank under a twenty per cent. carbolic spray. When the uterus is reached, the operator is guided by one of its horns to an ovary, which is removed by an écraseur, or by simply twisting it between the thumb and index finger; the second ovary is sought and treated in a similar way; the external wound is then closed with a few interrupted sutures. The cow is kept in a stall, on low diet, for two or three days, but is turned out to pasture quite well at the end of a week. It is stated that a cow thus operated upon yields 5,110 quarts in twelve months for more than eleven years, whilst a good milker in the natural state yields about 2,736 quarts a year.

THE fifty-second annual meeting of the British Medical Association will be held in Belfast on July 29, August 1, 2, and 3. Dr. James Cuming, physician to the Belfast Infirmary, and Professor of Medicine in Queen's College, is the president-elect.

The London Medical Record.

Article 3024.

NEWMAN, ROBERTS, HAMILTON, GAIRDNER, AND OTHERS, ON ALBUMINURIA.*

During the last session, a discussion on the pathology and clinical significance of albuminuria occupied four meetings of the Glasgow Pathological and Clinical Society. Subjoined is a brief summary of the arguments of the speakers.

The discussion was opened by Dr. Newman (Glasgow), who, after describing the normal histological arrangement of the blood-vessels, tubules, and lymphatics of the kidney, and having drawn attention to the ease with which the latter could be injected from the ureter in a healthy kidney, described the changes that took place in chronic interstitial nephritis and acute parenchymatous nephritis respectively, pointing out that the lymphatics in the former condition became obliterated by the connective tissue growth. He then answered the question why albumen did not appear in normal urine, by assuming that osmosis occurred from the tubules towards the intertubular venous plexus, by which some of the water and all the albumen was reabsorbed; and secondly, he explained the diluted state of the urine in interstitial nephritis by the condition of the lymphatics, and the excessive amount of albumen in parenchymatous nephritis by the destruction of the epithelium, and also by the fact that it was perhaps derived from inflammatory exudation into the tubules.

[Dr. Newman appears to fail to explain those cases of chronic interstitial nephritis in which there is no albumen.]

Dr. W. Roberts (Manchester), after having described the 'globulin reaction,' *i.e.* the milkiness produced by dropping albuminous urine into pure water, and having related a case of chronic Bright's disease in which recovery took place accompanied by the retrocession of a hypertrophied left ventricle, passed on to speak of physiological albuminuria. After alluding to the observations of others, he said that he had found albumen generally present in the concentrated urine of healthy persons, and he expressed his belief that a sensible increase of this normal albuminuria often occurred under slight occasioning causes. With regard to the best methods of testing for albumen, he condemned the new methods lately introduced, and stated that he had found that, by boiling and careful acidulation with acetic acid, it was possible to determine the presence of one part of albumen in 250,000 of a watery solution. It was necessary to avoid over-acidulation, and he commended the use of a single drop of the acetic acid of the *British Pharmacopœia*. In testing with nitric acid, it was important to wait a certain time (thirty to forty minutes) for the development of the reaction.

Professor Hamilton (Aberdeen), in the course of an able speech, referred to the paradoxical results obtained by Runeberg in experimenting on the filtration of albumen, and explained them by pointing out that the intestine was not a simple membrane, but was compounded of several layers, so that, when the pressure was increased, the fibres of one layer were pushed into the pores of another, and so obstructed the passage of any colloid. The albuminuria of heart-disease was, he thought, due to regurgitant capillary over-pressure; that of cirrhotic kidney to the obstruction of the circulation on the distal side of the glomerulus; and that of desquamative nephritis to the same cause. The high arterial tension and frequent hæmorrhages in Bright's disease he attributed to the altered specific gravity of the blood-plasma, which interfered with the essential conditions of capillary circulation, and produced friction by permitting the corpuscles to come into contact with the vascular walls.

Professor Gairdner (Glasgow) thought that pathological anatomy had impressed the notion of a gloomy prognosis in Bright's disease beyond the actual facts. He had known cases of recovery, and thought the disease should not be regarded as hopeless. It was doubtful whether the attempts to subdivide the disease were well founded. He had formed a high opinion of the work of Dr. Mahomed on this subject, and attached most importance to the way in which the kidneys performed their function of excretion of urea. He considered there was a great analogy between pulmonary catarrh and its consequences, and these renal lesions. He could not accept the doctrine of physiological albuminuria. Albuminuria, unless quite transitory, was always a danger signal of great significance, which could not safely be ignored.

Dr. Mortimer Granville (London) described cases of albuminuria due simply to vaso-motor disturbances in neurotic subjects, and protested against such being confounded with Bright's disease.

Dr. Mahomed (London) read an abstract of a paper about to appear in *Guy's Hospital Reports*. He criticised Professor Hamilton's theory of the cause of increased arterial tension from altered specific gravity of the blood-plasma. He insisted on the importance of the retardation of the circulation in the glomeruli as a factor in albuminuria. He advocated the use of brine, picric acid, and tungstate of soda as negative tests. Bright's disease was due to an acute or chronic form of blood-poisoning causing congestion of the kidneys and general increase of arterial tension. The congestion might be increased to such an extent as to produce acute inflammation, or lead only to chronic changes.

Dr. Finlayson (Glasgow), while not denying the existence of albuminuria from pressure, from nervous disturbance, or in healthy persons, took it that the broad clinical fact most obvious to observers was that it was generally dependent upon some blood-poison, instancing lead, cantharides, the various acute infectious diseases, pregnancy, gout, rheumatism, syphilis, jaundice, diabetes, and alcohol.

Professor Leishman (Glasgow) spoke of the albuminuria of pregnancy as possibly dependent upon the altered state of the blood, and the hypertrophy of the heart present in that condition. He next referred to the pathology of puerperal convulsions and the various theories which had been advanced, opining that the same toxæmic conditions afforded an explanation, and that they were not due to the albuminuria.

* Glasgow Pathological and Clinical Society. Discussion on Albuminuria, its Pathology and Clinical Significance. Reprinted from the *Glasgow Medical Journal*, 1884. Glasgow: Alexander Macdougall. 1884.

Professor Greenfield (Edinburgh) could not admit the existence of physiological albuminuria, although reliable observers had asserted that it occurred in healthy individuals. In his experience, it was very rare to find albuminuria in the cases of apparently healthy candidates for life-insurance, or in the urine of patients in hospital wards, without a definite cause for its occurrence. But he had met with cases of albuminuria without other signs of Bright's disease, especially in anæmic young women. With reference to this question, it was important to bear in mind the latency with which organic renal disease frequently occurred. He agreed with Dr. Gairdner in the belief that chronic Bright's disease was not incurable, and quoted a case in point. He did not think with Dr. Newman that the normal circulation in the glomeruli was under pressure, as the efferent vessel, though smaller, was highly elastic, while the afferent vessel was muscular and normally in a state of tonus. He thought that the polyuria of waxy and granular kidney was due to the loss of this tonus. He did not believe that albumen escaped into the tubules under normal conditions. In Bright's disease, the occurrence of albuminuria depended upon the structural changes in the kidneys, especially upon the changes in the glomeruli, which he explained in detail, and also in acuter cases on the exudation of inflammatory lymph. He could not maintain the existence of interstitial and catarrhal nephritis as distinct forms. Many cases of so-called cirrhotic kidney doubtless originated as acute catarrhal nephritis. But there was a form of cirrhosis, in some cases quite readily distinguishable, in which the changes were chronic peri- and endo-arterial thickening, with atrophy of the glomeruli and secondary atrophy of the tubules. It was in this class that there occurred polyuria, high arterial tension, with cardio-vascular changes, but no albuminuria.

Dr. Joseph Coats (Glasgow) disputed Dr. Newman's explanation of the occurrence of albuminuria; pointing out that in the acute form, according to Dr. Newman, the epithelium could absorb water but not albumen, while in the chronic form albumen was absorbed and not water, a contradiction for which he had failed to account. He accepted Bowman's view of the physiology of the urinary secretion, though he believed, as Nussbaum had shown, that under certain circumstances water might be separated by the tubules. He quoted Ponfick's assertion that hæmoglobin, when present, was separated by the tubular epithelium. In amyloid disease, he considered the albuminuria to be the direct result of the arterial degeneration. In heart-disease, &c., the albumen came from the vessels around the tubules, as well as from the glomeruli, in consequence of the stagnation of the circulation. In some cases, reflex spasm might cause albuminuria in the same way as this resulted from temporary occlusion of the renal artery. In Bright's disease, he believed, albuminuria was the result of inflammatory exudation, and its amount depended upon the degree of inflammation present; leucocytes also transuded to a larger extent than was generally supposed; the cells ordinarily called renal epithelium found in the urine were often altered leucocytes. He agreed with Dr. Greenfield that a sharp line of distinction was not to be drawn between parenchymatous and interstitial nephritis. He did not think albuminuria would occur from increased blood-pressure alone.

Dr. Macgregor Robertson (Glasgow) said Dr. Mahomed had confounded the two processes of filtration and osmosis. If the process of secretion of urine was held to be one of filtration through the glomerulus, and this he thought was generally admitted, there was no rational reason why albumen should not pass through. It seemed to him that the name of filtration was given to the process, but the essence of it denied. He had lately performed an experiment with a view to determine whether paralysis of the renal epithelium would cause albuminuria, and this he had found to be the case in a cat under whose skin he injected a quantity of atropine. He thought this experiment threw light on such cases as those referred to by Dr. Mortimer Granville.

Dr. Kirk (Glasgow) directed attention to the tests for albumen in the urine. Boiling and acidulating with acetic acid was a good test; nitric acid should not be used for this purpose. Heller's test was very inferior. Picric acid by the contact method was the best; the solution consisted of one part of water to nine of the saturated solution. The precipitation of peptone was not a source of fallacy, as this substance must have a pathological meaning. Urates were rarely precipitated. Heat interfered with the delicacy of the test, therefore mucin and quinine must be excluded by other tests. Chromic acid solution (sp. gr. ·1005) was an excellent test for albumen. Citric acid was the best test for mucin. The potassio-mercuric iodide produced too much reaction in normal urine to be relied upon. Tungstate of soda was a delicate test. No doubt these methods were not free from fallacy; but was heating and acidulating with acetic acid a perfect test? It was liable to produce a cloud from the presence of mucin, and the process of acidulation was not free from difficulty, too much acid vitiating the test.

Dr. G. S. Middleton (Glasgow) gave the results of his observations on albuminuria in continued fevers; he had found:—

1. That albuminuria occurs in 85 per cent. of cases of typhus and enteric fever;

2. That it occurs early in both, rather later in typhus, and persists till convalescence is well established;

3. That abundance of albuminuria indicates a severe case, but severe cases do not necessarily have abundant albuminuria;

4. That tube-casts of all sorts are frequent and more numerous in typhus, and, when abundant, the case is severe;

5. That albuminuria is more common in the febrile stages of typhus and enteric than in the febrile stage of scarlatina.

He did not agree with Dr. Coats in his view that renal epithelium was rarely met with in the urine. He thought the essential cause of the albuminuria in these fevers was the interference with the nutrition and functional activity of the renal epithelium, by the fever poison and effete products circulating in the blood. He considered that the arguments which had been advanced against Dr. Newman's theory had failed. In conclusion, he referred to the observations of Dr. Munn, of New York, on albuminuria among candidates for life-assurance.

Dr. J. Lindsay Steven (Glasgow) could not admit the existence of a physiological albuminuria. Nor could he believe that mere increase of blood-pressure was a cause of albuminuria. He defended the view that the secretion of urine by the glomeruli was not a simple process of filtration, but quoted Heidenhain in favour of the view that it was a vital function of the cells of the glomerular vessels. In

Dr. Robertson's experiment, it might have been these and not the tubular epithelium that were paralysed.

Professor Cleland (Glasgow) thought there was no evidence that simple squamous epithelium ever took on a secreting function. In opposition to Dr. Greenfield, he confessed that he had never seen two efferent glomerular arteries, and had no doubt that the opening of exit from the glomerulus was smaller than the aperture of entrance. He also argued that the pressure in the glomerulus must be increased. He did not think the experiments quoted by Dr. Mahomed, of plunging freshly excised kidneys into boiling water, proved that no albumen transuded through the glomerulus, as the quantity was too small to be detected by so rough a test; and he was in favour of the view that albumen did so transude and was normally absorbed by the epithelium, this function giving meaning to the loops of Henle.

Dr. Perry (Glasgow) did not believe in physiological albuminuria. He thought the products of digestion were a fertile cause of albuminuria. He suggested that antiseptic treatment had diminished the frequency of amyloid disease in surgical cases. In pure amyloid disease, he thought the quantity of albumen was small. He had rarely met with interstitial nephritis in a patient 'who had been a total abstainer during his whole life.'

Dr. Oliver (Harrogate) thought it very desirable to discover the presence of any proteid in the urine. He raised the objection to the use of heat and acetic acid, that M. Méhu stated that oxalate of lime in the urine gave a milkiness with this test. He thought the discovery of minute traces of albumen, 'minimal albuminuria,' of clinical importance, as indicating mild pyelitis which passed on to more serious disease. In conclusion, he alluded to his method for quantitative estimation of albumen, described in the *Practitioner* for February 1884.

Dr. Francis Henderson related a case of permanent recovery after chronic albuminuria, and alluded to the causes of intermittent albuminuria —digestion, chilling of the surface, the erect posture, active exercise. If digitalis contracted the blood-vessels, and also diminished albuminuria, there was ground for believing that this condition was due to overdistended vessels.

Dr. Newman, in reply, dealt with some criticisms made by Dr. Greenfield, and took exception to some of his statements. He asked how Dr. Coats accounted for the occurrence of egg-albuminuria? He stated that amyloid disease had become very rare at the Royal Infirmary. He differed from Dr. Coats in thinking that the albumen in amyloid disease was large. (Dr. Coats then gave the authority of Leube for his statement that it was usually 2 per cent. in this disease.) He renewed his statements about the condition of the lymphatics in acute parenchymatous and interstitial nephritis, referring to his preparations. He disputed Dr. Greenfield's statements about the relative sizes of the afferent and efferent glomerular vessels, referring to his preparations, and showing an example of two efferent vessels as a curiosity. He accused Dr. Greenfield of confusing the ideas of pressure and velocity, and said both Dr. Greenfield and Dr. Coats had mistaken the theory he had advanced at the beginning of the discussion. He thought there was a tendency among medical men to look upon albuminuria too seriously, and that from this point of view Dr. Roberts had done good service in speaking of physiological albuminuria, though the name was a bad one.

Professor McCall Anderson, the president, in concluding the discussion, complimented Dr. Newman on his manner of opening the discussion. He summarised the statements of other speakers. He said his own experience with candidates for life-assurance was, that albuminuria did not occur except when from the other surroundings he should have examined the urine. He alluded to albuminuria in exophthalmic goître as an example of neurotic albuminuria. He agreed with Dr. Newman that the albuminuria in amyloid disease was not large. He thought the high arterial tension to which Dr. Mahomed had drawn attention was of the utmost importance. Referring to the tests for albumen, he bore testimony to the value of picric acid. In conclusion, he hoped that at some future time the society would discuss the treatment of albuminuria.

ROBERT SAUNDBY, M.D.

ARTICLE 3025.

SAUNDBY ON THE GLASGOW DISCUSSION ON ALBUMINURIA.

DR. R. SAUNDBY (*Glasgow Med. Jour.*, June 1884) makes the following comments on points raised in the recent discussion on albuminuria at Glasgow. He thinks the practical question is not whether the people in whose urine Leube and others have found albumen were really and absolutely healthy—an evidently insoluble problem; but, what is the diagnostic and prognostic value of albuminuria as a guide to the existence of organic changes in the kidneys, either present or impending? He points out that many cases have been recorded, which appear to contradict the widely held opinion that albuminuria indicates a condition which sooner or later tends to organic renal disease; and he relates an interesting example of what was apparently a bad case of albuminuria of adolescence terminating in a complete recovery, which had been maintained for eleven years. He believes it to be high time that the text-books extended the duration of Bright's disease from the 'six months to two years' commonly taught. He has never seen albuminuria in a perfectly healthy person, but he has often seen it where he had the strongest reasons for believing that it was not dependent upon structural disease of the kidneys. If those who carp at the phrase 'physiological albuminuria' are satisfied with the presence of anæmia or dyspepsia as an explanation of the albuminuria, they appear to miss the whole point worth contending for, which is the relation of albuminuria to structural kidney-disease. He thinks this grave diagnostic significance does not exist, and that in all cases the microscope must determine the state of the kidneys, by the existence, character, and number of the tube-casts.

In testing for albumen, he rejects the new methods as fallacious, recommending the use of heat and acetic acid with the following precautions. The urine should be that passed after breakfast; it must be clear, and, if necessary, should be filtered, with or without previous addition of sodium chloride, or magnesium sulphate. Putrid urine is unfit for accurate examination. Fill a test-tube two-thirds full of urine, and boil the upper half. *It must be well boiled, not merely heated to boiling point.* Acidulate with a few drops of *dilute* acetic acid. Hold the tube against a shaded background, with the light falling from above, when

the faintest haze may be detected by contrast with the clear fluid below. In a bad light, or by artificial light, the detection of a faint haze with certainty is impossible.

The proteid detected by this method is serum-albumen or paraglobulin. He does not think, from experiments he has made, that either oxalate of lime or mucin constitute practical sources of fallacy. He admits that picric acid is a test of delicacy and convenience, and may be used with knowledge of its sources of fallacy; but he thinks the heat test, as he has described it, should be generally adopted by the profession for ordinary clinical purposes.

Article 3026.

KISPERT ON A CASE OF MOVABLE LIVER.

The rarity of this affection, and our imperfect knowledge of it, together with the fact that this case is the first met with as yet in Spain, induced Dr. Kispert, of Madrid, to send the following account to the *Berliner Klin. Wochensch.*, No. 24, 1884.

A woman, aged 43, 5 feet in height, came under treatment in April 1883. She had had measles when five years old; at sixteen the catamenia appeared, and were regular for four years, then irregular; at twenty-nine she married, and had two children and four abortions—the last of these occurred two years before the above date. The last thirteen years of her life had been spent in Madrid, where she worked hard, doing much washing and lifting heavy weights, and where she suffered from ague for nine or ten years. Seven years ago she began to have uneasiness in the epigastrium, and noticed a swelling there at times. At the same time she had pains in the abdomen, and felt a great weight in the right side, and could lie only on the left. Two years ago she began to notice a tumour on the right side of the abdomen, which caused a fixed pain from time to time. She also complained of eructations and acidity of the stomach. The stools were normal, menstruation scanty and irregular, the urine normal.

Physical examination revealed the following. The body of the uterus was small, the cervix enlarged; the uterus was rather low, and easily movable. The perinæum was relaxed; there was slight cystocele; the spleen was enlarged, reaching 4 to 5 centimètres under the left ribs. There were a subicteric tint of the skin and sclerotic, facial chloasma, and much pigmentation on other exposed parts. An anæmic cardiac murmur was heard, and a loud murmur in the jugular veins. The mammæ were atrophied. There was slight rhonchus in the right bronchial tubes. She had emphysema of the right lung. The circumference at the navel was 83 centimètres on expiration, 83·4 centimètres on inspiration, at the waist 78 centimètres. The distance of the xiphoid process from the navel was 16 centimètres; from the naval to the symphysis pubis 17·8 centimètres, to the anterior superior iliac spine on the left side 17 centimètres, on the right 18·7 centimètres.

The abdominal integument was easily depressed, almost devoid of fat, and projected somewhat on the right side. Palpation revealed a small globular tumour in the epigastrium. In the right part of the umbilical region, projecting partly into the right lumbar and right iliac regions and partly into the hypogastrium, was a larger tumour of ellipsoid shape. Both tumours together had an hour-glass appearance, were smooth and firm to the touch, and no fluctuation was felt. The upper one was about 6 centimètres across, the lower one 14 centimètres. The length of both together was 21 centimètres. The mass was easily movable to right or left, and could be pushed partly into the right hypochondrium, but not altogether, probably because the diaphragm was depressed by the right emphysematous lung. On the other hand, the tegument could be deeply depressed over this region; and percussion here gave no dulness—anteriorly, posteriorly, or laterally. There was dulness over the tumour, including the small part in the epigastrium. To the right of the tumour, the ascending colon was distinctly made out by palpation and percussion. The transverse colon passed under the tumour. On superficial observation there was no sharp boundary to the tumour, but by deep pressure to the left its border could be unfolded, and then a distinct sharp edge could be felt, with two fissures in it. One fissure was at the junction of the smaller with the larger tumour, and corresponded to the interlobular fissure, the other, about 7 centimètres lower down, was the fissure of the gall-bladder. This latter was not distinctly made out, owing to the folding down of the anterior border.

That this mass was the liver, may be concluded from the following reasoning. No liver-dulness existed in the normal site of the liver, and there were no symptoms of an atrophied liver. It could not be a hydronephrosis, with or without a floating kidney, since there was no fluctuation, and, during ten months' observation. no alteration of its shape and size; besides, its easy mobility, especially towards the right hypochondrium, is an argument against hydronephrosis. The duration excludes malignant growths. A fibrous or a fatty tumour is out of the question; moreover, such tumours would not show the characteristic rolling back of the anterior border. Ovarian tumour is altogether excluded, by the fact that this tumour enlarged from above downwards. Chronic peritonitis (which in one case P. Müller took for dislocated liver, but which the necropsy revealed) may be equally excluded, especially since the tumour here occupies the greater portion of the right half of the abdomen. It must therefore be pronounced a case of dislocated liver.

The rolling backwards of its border is easily explained. The liver, when placed on a table, flattens itself out and widens its fissures, and its shape in the body is simply due to its surroundings. In the above case, it hung down from the suspensory ligament, and, following the laws of gravity and its own elasticity, it assumed a more or less spherical shape, its borders being turned back. The hour-glass contraction was due to the interlobular fissure, and the insertion of the suspensory ligament.

Upon inquiry how this dislocation was caused, we must consider how the liver is normally fixed and attached above. This is really owing to two bands, the suspensory ligament and the coronary ligament. There are various views as to the shifting of the liver. Some consider pregnancy with a pendulous abdomen answerable. Winkler thinks that it is chiefly abdominal pressure which maintains the liver *in situ*, and that a relaxed condition of the

abdominal coverings produces lowering of the diaphragm and liver. But it must be remembered that the curvature of the diaphragm is maintained by atmospheric pressure and the elasticity of the lungs in the unopened thorax. Moreover, pendulous belly is common enough, while a movable liver is a rarity. And lastly, in Winkler's case, no mention is made of any intrathoracic disease which might have depressed the diaphragm. Thierfelder rejects all views which directly connect movable liver with pregnancy, owing to the rarity of the former; and with tight lacing for the same reason. Meissner supposes an abnormally long suspensory ligament—a meso-hepar—as a congenital anomaly here.

The author would prefer the term acquired meso-hepar in place of congenital—and that from gradual lengthening of the suspensory ligament. The fact that wandering liver is only observed in women advancing towards middle age, and that it has never yet been observed in men, are arguments against the congenital theory. Again, in a case of Barbarotto, and in two cases of Wassiljeff, there was at the same time a movable spleen, and we should have to imagine a congenital abnormal meso-spleen as well.

In most cases there have co-existed extreme abdominal flaccidity, poverty of blood, and want of fat. Now this woman had an enlarged spleen, from her intermittent fever; and we may well suppose that her liver had enlarged also at some previous time, causing stretching of the suspensory ligaments, and that the sudden retrocession of the organ left them flaccid and elongated like the uterine ligaments after pregnancies. The quickness of the retrocession is evidently an important factor. In all the hitherto published cases, except one, the liver was found of normal size and consistency, so that increased weight cannot be a cause. Pregnancy is known to have a tendency to cause parenchymatous degeneration of the glandular organs; and, in the published cases, this may have occurred with a corresponding enlargement, which afterwards very quickly subsided. Wandering spleen also only occurs in women, and usually only with wandering liver. Such spleens are often of normal size, but frequently previous intermittent fever and several pregnancies have occurred.

The etiology of movable liver would be thus:—

1. Previous alterations, especially degenerative disturbances in its pigmentary apparatus, such as may occur anywhere;

2. Anæmia, or other constitutional disturbance;

3. Pregnancies, abdominal distensions, pendulous belly.

Unfortunately, no necropsy of movable liver is yet recorded.

The prognosis is not unfavourable.

The treatment, so far, has been the wearing continually a broad and firm binder, which has removed or lessened the symptoms of discomfort. Should this be insufficient, the author suggests the reposition of the liver and an operation to fix it, viz., to make an incision parallel to the ribs, and to attach the liver by three sutures of very strong catgut to the edges of the wound—the whole antiseptically. EDWARD J. EDWARDES, M.D.

THE next annual meeting of the British Medical Association is to be held in 1885 in Cardiff. Dr. W. T. Edwards, Senior Physician to the Glamorganshire Infirmary, has been appointed President-elect.

ARTICLE 3027.

STAPLES ON HYDRONEPHROSIS.

DR. GEORGE A. STAPLES, in the *Journal of the American Medical Association*, April 1884, contributes a carefully compiled article on hydronephrosis, based on a collection of seventy-one cases, one of which came under the personal observation of the author. He begins with a history of the affection, mentioning that it was known as hydrops renalis, expansio renum, hernia renalis, and hydrorenal distension, before Rayer named it *hydronéphrose*.

Hydronephrosis may be either congenital or acquired. The former he dismisses with the remark that it is frequently associated with malformations elsewhere; and then he proceeds to discuss the etiology of the latter kind. Hildebrandt is quoted as showing the relation between hydronephrosis and retroflexion of the uterus, whilst Saexinger, Gusserow, and Todd are referred to as pointing out the effect of cancer of the uterus in causing obstruction of the ureters; F. A. Walter and Heller as showing the occasional result of double ureters; Simon, Labadie-Lagrave, Ebstein and others for various causes. The author cites Professor Kehrer, to the effect that hydronephroses are only met with where there is a long-continued but not complete obstruction to the flow of urine, but he makes no mention of the experiments of Straus and Germont upon the ureter, which point to an opposite conclusion. He next traces the effect of the obstruction in causing gradual destruction of the renal tissue, leading to large sacculated cysts. The fluid found in the cysts is usually of low specific gravity, but contains some of the ordinary solid constituents of urine, which persist so long as any secreting structure remains, after which a mucoserous fluid is found. When unilateral, the symptoms are often very slight, till the tumour attains a large size.

Coming to diagnosis, he mentions that surgeons experienced in abdominal diseases have admitted great difficulties, and that many cases have been operated on for ovarian tumours which proved to be hydronephroses. The site of origin is important in distinguishing a hydronephrosis from ovarian tumour. The relation to the intestines is different, and the rectum may be inflated to make this more evident. Ovarian tumours move *in toto*. The uterus is free in kidney cases and the pelvis unoccupied, a point which may be exactly determined by the hand in the rectum. The catamenia may be at fault in the one, and the urine in the other. Exploratory puncture would give a different fluid, and sounding through the cannula would lead deeper in the case of kidney than in ovarian disease. The methods of distinguishing other fluid tumours from hydronephrosis are dismissed in a few words, and he proceeds to give Octerlony's table contrasting the symptoms of cancer renis and cystic disease of the kidneys with hydronephrosis. When it is bilateral, the patients are often confined to bed only a few days, and die in a rapid and unexpected manner. Traumatic or spontaneous rupture of the cyst is a not unusual termination, observed by Simon in four cases.

In discussing treatment, he quotes freely from the reporter's paper (*Brit. Med. Jour.*, Sept. 29, 1883), and from M. Quénu. As little hope is to be expected from palliative treatment, operative interference is generally to be recommended. Ventral and lumbar nephrectomy are then described. The incisions used

for the former are the old incision in the linea alba, and Langenbuch's on the outer side of the rectus. For lumbar nephrectomy he mentions Linser's vertical incision, Couper's oblique, Klineberger's curved and Clement Lucas's combined vertical and oblique, consisting of an oblique incision within about half an inch of the last rib and parallel with it, and a vertical along the outer border of the quadratus lumborum, commencing at the upper edge of the last rib and extending to the iliac crest. Some details of the operations are then mentioned, and he gives a table of nephrectomies performed for hydronephrosis ; 19 of these cases were operated on by the abdominal method, of which 8 recovered, or a little over 42 per cent. ; and 11 were treated by the lumbar method, 7 of which were permanently cured, or over 63 per cent.

He proceeds to discuss the effect of puncture or aspiration without the admission of air, and continuous drainage through the loin, as means of obtaining obliteration of the cyst. Details are given of a case observed by the author, for which aspiration was performed on three occasions. This patient was liable to what the author terms 'spells,' which, we gather, mean paroxysms of pain accompanied by prostration. A table is given of 17 cases treated by puncturing the cyst ; 11 died, 3 were cured, and 3 were temporarily relieved. Lastly, he discusses continuous drainage, and gives a table of 22 cases treated in this way, 18 of which recovered. R. Clement Lucas, B.S.

Article 3028.

KNOLLER ON FOREIGN BODIES IN THE BLADDER.

In the recently published *Mittheilungen aus der Chirurgischen Klinik zu Tübingen* is contained a paper on foreign bodies in the bladder, based on thirteen cases that have been treated in the Tübingen clinic in the course of the last thirty years. The term 'foreign body' is used in a restricted sense, so as to exclude stone and such bodies as are formed within the organism. In by far the most cases, the foreign body enters the bladder by the urethra.

According to the statistics on this subject published in 1856 by Denucé, of Bordeaux, males and females constitute the subjects of this injury in almost equal numbers. In males, the foreign bodies are most frequently pieces of stalk or straw, wire, lead-pencil, and in females any of the different forms of needle and needle-case. The female patients are for the most part young, whilst most of the men are advanced in years. In six of the thirteen cases recorded by the author of this paper, the foreign body had passed into the bladder by the urethra. The patients in three cases were males, and aged respectively 45, 49, and 54 years. Of the three females, one was aged 16, one 24, and the last 25 years. A much smaller group is that of cases in which the foreign body consists in a broken and detached piece of some surgical instrument, as, for instance, a catheter, bougie, or sound, a lithotrite, caustic-holder, &c. Catheters of German silver become very fragile after having been kept long, and ought not then to be used. Of elastic catheters and bougies, Nélaton's catheter of vulcanised caoutchouc, after it has been kept long unused, becomes extremely fragile, whilst the ordinary elastic bougies become dangerous only after frequent use and prolonged retention in the bladder. Gutta-percha catheters, it is pointed out, are particularly dangerous. In most of the cases of this group the accident is owing to a fault rather of the patient than of the surgeon, and is the result of too frequent and prolonged use in catheterisation of a worn out instrument. The author's list includes five of such cases. In two instances the foreign body was the end of a metal catheter, and in the other three the end of an elastic catheter.

The second way in which foreign bodies may reach the bladder is through a wound in the wall of this organ. The injury in such cases is either a penetrating or a gun-shot wound. The penetrating wound through which the foreign body is passed is usually caused by some blunt instrument driven into the bladder from the perinæum or anus. One case of this kind is reported. A man, aged 31, in a fall struck his perinæum on the leg of a stool which penetrated into the bladder ; subsequently a vesical calculus formed, the nucleus of which consisted of a fragment of the man's underclothing. The retention of foreign bodies in the bladder occurs much more frequently after gun-shot wounds. Of 285 cases of gun-shot wound of the bladder collected by Bartels, eighty-one were complicated by retention of foreign bodies, consisting of portions of the fire-arm, or a fragment of bone, or a small portion of the clothing. Associated with the above injuries are those rare instances of ruptured bladder complicated by fracture of the pelvis, in which one or more loose fragments of bone are driven into the vesical cavity.

The third and least frequent way in which a foreign body can reach the bladder, is through a pathological communication between the bladder and neighbouring organs. The foreign body in such cases is usually something that has been swallowed, and has ultimately passed into the bladder from the ileum or rectum after adhesion and ulceration of their walls. By perforating ulceration also, fœtal remains of extra-uterine pregnancy, sequestra from necrosis of the pelvis, and the contents (teeth, hair) of dermoid cysts of the ovary, have penetrated into the bladder.

The foreign body is seldom expelled spontaneously by the urethra. Of 391 cases of foreign body in the bladder collected by Denucé, thirteen only terminated in this way. In two of the thirteen Tübingen cases, there was a spontaneous discharge. The foreign body in one case was a long piece of metal catheter which had been four weeks in the bladder, in the other a straw. The foreign body, after prolonged detention in the bladder, becomes invariably incrusted with lime-salts, and may form the nucleus of a vesical calculus. Small and round bodies are soon completely incrusted, whilst long thin bodies are incrusted only in the middle, and are quite free at their ends. If a fragile body, a straw for instance, be broken up in the bladder, each of the fragments may form the nucleus of a distinct stone. The rapidity of the incrustation and the size of any calculus that may be formed depends on the nature of the substance forming the nucleus. Vegetable material becomes rapidly incrusted, and of hard materials silver and gold and glass are less readily incrusted than iron. Beyond this incrustation and formation of stone, the presence of a foreign body in the bladder very seldom gives rise to any special complication. In six only of the many cases collected by Denucé was death due to the direct action of the foreign body on the wall of the bladder. Some few instances have been recorded of the

foreign body in the bladder of the female having penetrated into the vagina.

The surgeon having assured himself of the presence of a foreign body in the bladder, it becomes very necessary for him, before deciding as to the means of removing it, to make out its size, form, consistence, position, and mobility. This may be done by digital exploration from the rectum, by bimanual examination by the rectum and anterior wall of the abdomen, and by the use of lithotriptic instruments. The endoscope, Dr. Knöller thinks, is not likely to prove of much service in these cases. The last and most difficult problem is the removal of the foreign body in the readiest and least dangerous way. If the body be of small size, and have not been long in the bladder, the surgeon may await for some time the chance of its being passed spontaneously with the urine. To favour this, a large thick bougie may be passed into a distended bladder, and then withdrawn so as to allow the urine to rush out in a full stream. Extraction by the natural passage is indicated when the circumference of the foreign body does not exceed the calibre of the urethra, and when it can be broken up within the bladder. Since the introduction of lithotrity, and with the progressive improvement in the instruments used in this operation, the extraction of the foreign body by lithotomy has been less frequently performed. The statistics of Denucé show that, whilst before 1830 extraction was performed in 27, and lithotomy in 100, out of 127 cases, since this year, out of 122 cases extraction was practised in 101 and lithotomy in 21. In dealing with a foreign body in the bladder of a female, Dr. Knöller would advocate forcible dilatation of the urethra, introduction of the finger, and extraction by means of slender forceps. W. Johnson Smith.

Article 3029.

WEISSENSTEIN ON SECONDARY NERVE-SUTURE.

In the recently published *Mittheilungen aus der Chirurgischen Klinik zu Tübingen*, Dr. R. Weissenstein reports two cases of secondary suture of the musculo-spiral nerve, treated by Professor Bruns. In the first case, the patient (a man, aged 30) was operated on seven weeks after the date of the injury, and with such success that the hand, which had been rendered quite useless by the previously exciting radial paralysis, regained after an interval of six months its normal capacity. The operation in the second case, which had been performed four months after a wound of the right arm of a girl aged 10, had proved so far successful as to promise at the time of the last recorded observation a speedy and complete cure. Dr. Weissenstein has collected thirty-one other cases of secondary nerve-suture. Of these thirty-three cases, the injured nerve in ten was the musculo-spiral; in nine, the ulna; in seven, the median; and in two, the sciatic; and in one a branch of the musculo-spiral nerve. The shortest interval between the dates of injury and of operation was twelve days, and the longest interval nine years. In twenty-four of these cases decided success is stated to have resulted, there having been with regard to the paralysis either partial improvement or complete cure. In seven cases, it has been stated that there was perfect recovery, with restoration of the normal functions of the limb. In many of the cases with doubtful results, as those where there had not been very long intervals between the date of the operation and that of the last recorded observation, it is highly probable (the author thinks) that improvement will make still further progress, and even reach complete success. In six cases no good result, or but a very imperfect one, was attained.

In discussing the question as to how soon after the operation any signs of improvement in the condition of the paralysed extremity may be expected, the author points out that in determining this point it is necessary to make distinction between the disturbances of sensation and those of mobility. In many cases, sensation is restored very soon after the division of the nerve. This, however, is not due to any union of the divided nerve, but to a supplementary function of neighbouring sensory nerves which have remained intact. An analogous supplementary restoration of mobility occurs much less frequently and to a far less extent. In successful cases of secondary nerve-suture, the sensibility is speedily restored, whilst the restoration of the motor power is, as a rule, much retarded in consequence of atrophy of the paralysed muscles. The interval between the operation and the restoration of sensibility varies much in different cases. In four of the instances collected in this paper this restoration occurred within four days and, in a case treated by Mr. Holden, in sixteen hours. In the majority of cases, the first signs of returning sensation were noted in the third week from the date of operation. The earliest occurrence of the restoration of the motor function after secondary nerve-suture was on the seventeenth day. In six cases only did the restoration occur within one month from the date of operation. In two cases it occurred at the end of the second month, in three cases after the third month, in one case at the end of the fifth, and in another at the end of the sixth month, and in two cases not until after an interval of one year. The duration of the treatment—that is to say, the period required for the complete restoration of the functions of the limb—is much longer in cases of secondary nerve-suture than it is usually supposed to be. In this operation the surgeon has to deal with a nerve, the peripheral end of which has undergone a more or less advanced degree of degeneration. Moreover, a long time is required for restoring the normal condition of the atrophied muscles.

In performing the operation of secondary nerve-suture, it is necessary to observe the strictest antiseptic precautions, in order to ward off from the seat of suture inflammatory reaction and suppuration. The suture has hitherto been applied according to one or other of two methods. In one, the nerve-substance is traversed by the thread, in the other only the perineurium and the paraneurotic connective tissue The former, the direct suture, is the more violent method, but is more secure than the second or paraneurotic suture. Dr. Weissenstein recommends two superficial sutures, each of which should penetrate the sheath only, and be carried as far as possible parallel to the long axis of the nerve fibres. When a tough mass of connective tissue or a neuroma has been formed between the stumps of a divided nerve, such must be excised. If the ends of the divided nerve be far apart, and separated by cicatricial tissue, these should be refreshed. In order, however, to avoid much tension after the

application of the suture, as little as possible of the nerve ends should be cut away. According to the experience of Langenbeck, it seems that it is unnecessary to cut away until nerve-tubules can be recognised on the cut surface; for, in a case reported by this surgeon, in which there was very speedy restoration of the function of the sutured nerve, no nerve-substance could be found in the secured ends. Catgut, it is held, is the best material for the suture, as this material is least irritating, does not interfere with primary union, and is completely absorbed. In order to maintain continuous adaptation of the ends of the sutured nerve, and to favour primary union, it is of the highest importance to place the affected limb at perfect rest, and so fix the neighbouring joints in such position as to obviate as much as possible any tension of the nerve.

Dr. Weissenstein lays much stress on the methodical and persevering application of electricity during the after-treatment. In each of the two successful cases, treated by Professor Bruns, the induction current was applied daily during more than six months. In conclusion, it is asserted that the cases hitherto recorded prove beyond doubt that secondary nerve-suture is a justifiable operation, and that in old cases it is indicated whenever in consequence of division of a nerve-trunk or of a large nerve-branch the function of a limb has become considerably impaired. W. Johnson Smith.

Article 3030.

AMADEI, PELI, GAGLIO, AND DI MATTEI ON CRANIOLOGY AND BRAIN-WEIGHT, CHIEFLY IN THE INSANE.*

The gist of all these contributions may be expressed in a few words, although it would not be easy to give a brief, and at the same time satisfactory, account of the great mass of facts represented by the papers whose titles are given below.

Amadei's observations on the craniology of epileptics were made on thirty asylum museum skulls and on seventy recovered (discharged [?]) asylum patients. Only those cases were considered where the disease had been a malady of development and had appeared before the end of the eighteenth year. The skulls were found to have a cranial capacity, smaller on the average than the normal; while the weight, thickness, and compactness of the bones was greater. In the majority of instances some anomaly of form was observed, the most common deformity being one-sided development of the head, with corresponding obliquity of the face. This irregularity of outline, although valuable for diagnosis, is by no means characteristic, being absent in some epileptics and present in some non-epileptic.

Amadei and Peli agree in some important points. According to each of these observers, the cranial capacity in the insane, though varying within very wide limits, is, on the whole, greater than the sane; the skull at the same time is heavier, and Amadei states that it is thicker also. The latter observer tells us as well that the highest cranial capacity is found in the melancholic; the lowest in imbeciles and in epileptics; the pellagrous and maniacal come in the middle. Peli believes that the insane have a somewhat greater fronto-occipital diameter than the sane members of the community.

Amadei finds that, though the cranial capacity increases with the increase of stature, it does not do so proportionately, so that a tall person has a relatively smaller, though an absolutely greater, cranial capacity than a short person. In women the capacity is less for identical heights than in men.

The brain-weight in the insane shown in serial curves is seen to be highest in mania; though very high and very low weights are few. Melancholia comes next; and, in fact, it presents a greater number of very high weights.

The investigations into the relation between brain-weight and cranial capacity are interesting. They show to be erroneous the not uncommon supposition that one term might serve as an index to the other. If what might be called the full brain-weight be represented by 100, the weight of the organ in the insane varies from 71 to 97, according to the form of the disease. Mania and melancholia show the highest figures; the lowest figures are given by the various forms of dementia. The wasting of the brain in these cases is found to be relatively as well as absolutely much greater in men than in women.

Gaglio and Di Mattei differ from most of their predecessors as to the comparative weight of the two sides of the brain. These observers base their opinions on an examination of 59 brains. They conclude that the cerebral hemispheres are rarely equal in weight; sometimes one preponderating, sometimes the other; but on an average the right hemisphere is about 4 grammes heavier than the left.

[In connection with the foregoing, it is interesting to remember that Morselli (*Riv. Sper. di Fren.*, Fasc. iii., 1882) found that the specific gravity of the brain is on the average greater in the insane than in the sane. Of the other conclusions at which he arrived two or three may be mentioned. When the temperature of the air is high, the specific gravity of the cerebrum and of the cerebellum, especially the latter, is greater. The specific gravity of the cerebral substance is generally higher in cerebra and cerebella of small volume and of low absolute weight. In the insane, as in the sane, the specific gravity is lower in women than in men; the difference is least marked in the cerebellum. The greatest specific gravity of the cerebrum is reached in males between thirty and forty years of age; in females between twenty and thirty; in both sexes falling towards old age, and rising again after seventy. The specific gravity of the cerebellum is highest in both sexes between twenty and thirty, and then diminishes to increase with old age. The greatest specific gravity of brain is found in the alcoholic and epileptic forms of insanity; the lowest in paralytic dementia. Hyperæmia causes a high specific gravity; anæmia a low one. Sclerosis diminishes the specific gravity of the mesocephalon (pons Varolii and medulla oblongata) and cerebellum; softening and œdema, on the contrary, increase it.

None of the papers referred to give the methods of research employed by the authors. This is much

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* Amadei.—The Craniology of Epileptics. (*Riv. Sper. di Fren. e di Med. Leg.*, Fasc. iii., 1882.) Idem.—The Cranial Capacity of the Insane. (*Riv. Sper. di Fren.*, Fasc. iv., 1882, Fasc. i., 1883.) Idem.—Cranial Capacity in Relation to Stature. (*Ibid.*, Fasc. iv., 1883.) Idem.—The Weight of the Cranium in the Insane. (*Ibid.*, and *Annali Univ.*, Jan. 1884.) Idem.—Brain-weight in the Insane. (*Ibid.*) Idem.—Brain-weight in Relation to Cranial Capacity in the Insane. (*Ibid.*) Peli.—The Craniology of the Insane. (*Riv. Sper. di Fren.*, Fasc. iii., 1882.) Idem.—The Cephalometry of 670 Insane Persons in the Asylum of Bologna. (*Ibid.*, Fasc. i. and ii., 1884, and *Annali Univ.*, Jan. 1884.) Gaglio and Di Mattei.—Inequality in Development and Weight of the Cerebral Hemispheres. (*Riv. Sper. di Fren.*, Fasc. iv., 1882.)

to be regretted; for in such inquiries results vary according to the plan of investigation adopted: consequently the observations of different writers are not comparable.—*Rep.*]

William R. Huggard, M.D.

Article 3031.

ANREP AND POEHL ON PTOMAINES.

Professors V. K. Anrep and A. V. Poehl, of St. Petersburg, sum up (*Vestnik Sudebnoi Meditziny ee Obshtchestvennoi Hyghieny* [*The Herald of Forensic Medicine and Social Hygiene*], 1884, vol. 1, pp. 1–29) an interesting article based on their own investigations and a full review of the literature, as follows.

1. Putrefaction, fermentation, and other as yet indefinable alterations of albuminous substances, are acccompanied by the generation of alkaloid-like bodies, ptomaines.

2. The number of ptomaines is very great, and their chemical and poisonous properties are very different.

3. There are known fixed and volatile, fluid and solid, amorphous and crystalline ptomaines. It is interesting to note that all fluid ptomaines, like all fluid vegetable alkaloids (with the exception of pilocarpine) do not contain oxygen.

4. Almost all ptomaines change red litmus to blue, and syrup of violets to green.

5. Like alkaloids, they form salts with acids, the formation proceeding without giving off water (again similarly to alkaloids and ammonia).

6. In regard to their solubility, ptomaines behave very differently; some of them being soluble in water, others in ether, alcohol, benzine, chloroform, and amyl-alcohol. Ptomaine-salts are easily soluble in water.

7. Some ptomaines are tasteless and colourless; others possess an intense bitter taste or aromatic sweetish odour; and others again evolve a cadaveric odour, or one resembling coniine or nicotine. When treated with acids, they sometimes emit a pleasant floral odour.

8. Ptomaines obtained from rye-meal which has been subjected to fermentation, give the same reactions as the ptomaines of any other extractions. These reactions are as follows. (*a*) A solution of iodide of potassium with biniodide of mercury produces a whitish precipitate in a ptomaine-solution slightly acidulated with hydrochloric acid. Twenty-fours later, microscopic examination detects that the precipitate consists of minute prismatic crystals. (*b*) A solution of iodide of potassium, with iodine being added to an acidulated ptomaine-solution, produces either a flocculent or a finely granular red-brown precipitate, which is insoluble in diluted hydrochloric acid. (*c*) A solution of phospho-molybdenate of soda gives a yellowish amorphous precipitate which is insoluble in diluted nitric acid, but, on the addition of liquor ammoniæ in excess, at first takes a blue-green colour and afterwards dissolves, giving either a bright blue or a green solution. The blue colour is mostly observed during the first stages of putrid decomposition. The original precipitate produced by phospho-molybdenate of soda, on being heated, assumes a green colour, without any addition of ammonia. (*d*) Phospho-wolframic acid (prepared after Scheibler's method) gives whitish or greyish precipitates which are insoluble in diluted sulphuric and hydrochloric acids, but easily soluble in ammonia. (*e*) A solution of tannic acid gives a white precipitate; the latter does not appear if tartaric acid be present. (*g*) A solution of iodide of potassium with iodide of bismuth in presence of diluted sulphuric acid, gives a yellowish precipitate, part of which passes into solution on heating, and reappears again on evolving. (*h*) A solution of iodide of potassium with iodide of cadmium sometimes produces precipitates which are soluble in the excess of the reagent, and which, by degrees, assume a crystalline structure. This reagent precipitates the products of the first stages of putrefaction; later on in the course of the latter, there appear some products which are not precipitated by iodides of potassium and cadmium. (*i*) In some cases, a solution of corrosive sublimate gives precipitates which gradually take a crystallinic structure; in other cases, however, ptomaines are quite indifferent to their reagent. (*j*) A solution of chloride of platinum gives, with some of ptomaines, precipitates which are usually crystalline and soluble in hydrochloric acid, and consist of a double salt (chloride of platinum *plus* chloride of ptomaine). Similar double salts are given by chlorides of gold and zinc.

9. Ptomaines are optically inactive bodies.

10. The colour-reactions of ptomaines are as various as those of vegetable alkaloids.

11. In the course of a forensic chemical examination, it is advisable to discard the use of sulphuric acid, and to use tartaric acid. The further treatment is to be performed after Dragendorff's method.

V. Idelson, M.D.

Article 3032.

FLITNER ON THE THERMOMETRY OF THE EAR IN A PHYSIOLOGICAL AND PATHOLOGICAL ASPECT.

Dr. Bogdan Flitner (*St. Petersburg Inaugural Dissertation*, 1882) has made 100 measurements of the temperature in the meatus in healthy subjects, and 114 in the patients suffering from various acute and chronic affections of the ear. The measurements were taken by means of a special thermometer invented by Dr. R. R. Wreden.

[A description of this very convenient little instrument may be found in the *St. Petersburg Medic. Zeitschr.*, November 1879. It is prepared by Mr. Reinhardt in St. Petersburg, at the price of 8 roubles.]

The author found that the average temperature in the meatus in healthy persons was 36°·8 C., the averages for the axilla and rectum being at the same time equal to 37°·5 C., and 37°·8 C. The results of the measurements in the cases of ear-disease (otitis media purulenta, otitis media catarrhalis, myringitis, otitis externa, and otitis interna) are given as follows. 1. The difference between local and general temperature, which, under normal conditions, is equal to 1°·0 C., oscillates in all acute ear-affections between 0°·3 and 0°·4, and in all chronic, between 0°·3 and 0°·5. That is, in cases of inflammation of the ear this difference is diminished more than half a degree (Cent.) comparatively with the standard. 2. In cases of inflammatory processes in the middle and external ear, the temperature of the diseased ear rises above the normal in acute forms from 1°·0 to 1°·2 C., and in chronic 0°·3 to 0°·5. 3. In inflammations of the internal ear the temperature of

the diseased organ rises in acute cases 2°·0 C., and in chronic 0°·7. 4. In acute inflammations of the middle and external ear, the rectal temperature rises 0°·4 to 0°·7 C.; in those of the internal ear, 1°·6 C. 5. In chronic ear-inflammations, the rectal temperature remains at the standard, or even falls below it. 6. In acute ear-diseases, the temperature of the healthy ear rises from 0°·6 to 1°·1 C. above the standard; and in chronic, from 0°·2 to 0°·4. 7. In affections of the internal ear the difference between the temperature of the diseased organ and that of the intact is less (being only 0°·2) than in affections of the external and middle ear (where it is equal to 0°·3 to 0°·4). The general conclusions as summarised by Dr. Flitner are these.

1. Daily measurements of the temperature in the course of inflammations of the ear show that the temperature of the latter stands in a constant regular connection with the general temperature of the body. Therefore, in ear-affections, the local measurements not only may be substituted for, but even must be preferred to, measurements of the temperature in the rectum and axilla.

2. The same may be asserted in regard to ear-affections complicated with pneumonia, erysipelas, and other diseases.

3. In cases of ear-affections complicated with morbid processes in the cranial cavity, or even on the surface of the skull (caries, phlebitis of the sinuses, erysipelas), the temperature in the meatus sometimes stands higher than in the rectum. Hence, the measurements in the ear-canal give us a clearer indication as to the course of morbid process in the head than the rectal measurements, and are preferable to the latter beyond any comparison.

V. Idelson, M.D.

Article 3033.

FENGER AND LEE ON OPENING AND DRAINAGE OF ABSCESS-CAVITIES IN THE BRAIN.

In this original communication (*American Journal of the Medical Sciences*, July 1884) by Christian Fenger and E. W. Lee, of Chicago, a case is reported to show that a cerebral abscess-cavity may be drained and washed out without any detriment to the patient. The possibility of spontaneous recovery in traumatic cerebral abscess, together with the possibility of spontaneous evacuation by ulceration upwards through the vault of the cranium, or downwards into the orbital or nasal cavity, has been thought to furnish the best justification of the surgeon's non-interference with the disease; but if it be considered how exceedingly rare is the spontaneous cure of brain-abscess, the justification, the authors hold, must appear rather slender. In the great majority of cases, the surgeon is deterred by the difficulties of the diagnosis. A number of cases have been recorded in which trephining was performed with a view to evacuate an abscess, in which the disease afterwards found to exist was meningitis or encephalitis. The disastrous consequence of trephining in cases of meningitis or encephalitis can, the authors state, be prevented by antiseptic precautions whenever it is possible to observe them.

The subject of the case recorded in this paper was a police officer who, on December 3, 1882, received a pistol-shot wound over his left eyebrow. There was a small wound of entrance over the junction of the middle and outer thirds of the supra-orbital margin. The bone was much comminuted, and the fracture extended into the frontal sinus; but the probe failed to detect any fracture of, or to find any passage through, the lamina interna into the cranial cavity. When the patient was first seen by a medical man, very soon after the receipt of injury, the bullet could be felt at a point about two centimètres above and to the outer side of the wound. This was cut down upon and removed. On Dec. 9, the patient having suffered for some days from orbital pain and headache, ether was administered, and a free incision made over the seat of injury. A number of small pieces of lead were found among the fragments of bone, and a small abscess-cavity in the roof of the orbit was opened. On Jan. 5, 1883, the patient complained of headache; on the following day he suffered from persistent headache with nausea; and on the evening of the 11th he was comatose, and could be roused only with difficulty. As the temperature remained normal, and so indicated abscess rather than meningitis, the authors deemed it advisable to resort to trephining. The knife was entered at the original wound of entrance, and then passed directly upwards for a distance of 2 inches, cutting through the periosteum. The trephine employed had a diameter of 17 millimètres; its lower border was placed 2 centimètres above the supra-orbital margin, its inner border 4 centimètres to the left side of the median line, and its outer border 1 centimètre to the inner side of the linea semicircularis. The piece of bone that was removed presented no trace of fracture. A crucial incision was made into the dura mater, but no pus was met with between this membrane and the arachnoid. A hollow needle attached to an ordinary hypodermic syringe was now used in making a succession of exploratory punctures. Having been pushed downwards towards the roof of the orbit, and subsequently in horizontal, backward, inward, and outward directions, always without result, the long needle was entered in a direction backwards and slightly inwards, when, on reaching a depth of from 2 to 2½ inches, the syringe to which it was attached became filled with a thin, palish-red, and semi-transparent fluid of a peculiar odour. The needle was now used as a guide, along which the closed blades of a pair of narrow operating forceps were pushed in, separated, and then withdrawn. As the blades of the forceps were separated, about one ounce of the above described reddish, opaque, thin fluid spurted out with some force, and was followed by at least a teaspoonful of thick yellow pus. A fenestrated tube, 8 millimètres in diameter, was introduced into the wound in a direction backwards, a little upwards, and somewhat towards the median line. This tube lay within the dura mater to the exent of 8 centimètres, and immediately discharged a few drops of pus. This having been secured in this position, the borders of the external wound were brought together, and a thoroughly antiseptic dressing applied. Three hours later, consciousness returned, and the patient answered questions in a slow but coherent manner. On Jan. 13 the abscess-cavity was washed out with a saturated solution of boracic acid, and the drainage-tube was taken out, cleaned, and replaced. The dressing was repeated twice daily for two weeks, and the drainage-tube was gradually shortened down to 4 centimètres on Feb. 12, 'when the patient again complained of headache and

nausea.' On Feb. 20 'he was in a semi-comatose condition,' and Dr. Lee then inferred that the remaining length of the tube was insufficient to drain the cavity of its pus, or that some pocketing of matter had taken place, causing intracranial pressure and coma. The patient having been slightly anæsthetised, the wound was dilated, and the old cavity, which contained about half a teaspoonful of thick yellow pus, was opened up and again drained. Subsequently, the discharge from the abscess-cavity steadily diminished in amount, and became more serous. Early in March, however, it again resumed a more purulent character. A weak solution of carbolic acid was now substituted for the solution of boracic acid as an injection. The drainage-tube was removed on April 10, and the patient was able to take a walk on the 30th, and on May 15 to attend to his duties as a police officer. In July he had three epileptic fits, and in December was again seized. The patient had had no other fits up to the date of the publication of this paper, and had been able to attend to his work as usual. On March 2, 1884, a fistula presented itself at the seat of the trephine opening, from which there was a discharge of from five to ten drops of pus in the twenty-four hours.

In commenting on this case, the authors treat of the symptoms and diagnosis of traumatic cerebral abscess; the operation of trephining in such cases; the practice of exploratory puncture and aspiration; and the drainage of cerebral abscess. In conclusion they state that, supported as they are by but a single case, they do not wish to recommend any unreasonably bold or hazardous proceeding in so difficult and delicate a matter as the surgical treatment of cerebral abscess. They think, however, that the procedures instituted in the above case strictly conform to the rational methods of modern surgery in treating abscesses in general; and because of this, and not because the patient recovered, they regard this case as answering in the affirmative the question, Is it possible that abscesses in the brain can be treated advantageously, on the same principles as abscesses in other parts of the body?

W. Johnson Smith.

Article 3034.

LELOIR ON PURPURA.

In a contribution to the study of purpura (*Annales de Derm. et de Syph.*, Jan. 1884) M. Leloir says that the pathogenesis of purpura is still surrounded by great obscurity. Few cases are recorded in which the vascular lesions have been ascertained. The author gives two cases in full detail, the first being a good example of vascular purpura, the lesions of the cutaneous vessels found, on *post mortem* examination, being an enormous dilatation of the vessels, and pronounced alterations of the vascular walls. In contrast with this case, in which the vascular origin appeared undeniable, he relates a second, in which no vascular lesion could be found, although there were numerous deep and extensive cutaneous hæmorrhages. Here the cause evidently was an alteration of the blood. But in the first case, with appreciable lesions of the capillary vessels, the hæmorrhages were small and limited; while in the second, with vessels apparently intact, the hæmorrhages were extensive and situated in the middle region of the dermis. Diapedesis does not seem sufficient to account for so pronounced hæmorrhages. In some part there must be vascular rupture. One may suppose (with Hayem) that in certain diseases the blood-plasma acquires the property of provoking concretions by precipitation, leading to multiple capillary embolisms, and thus causing certain purpura hæmorrhagica from hæmorrhagic infarcts. Certain forms of purpura of the lower extremities in cachectic subjects may be explained by stagnation of blood (often with œdema), and alteration of the blood; intravascular fibrinous coagulation, formation of embolic clots, hæmorrhagic infarcts, and cutaneous hæmorrhage. It is probable that many cases of purpura from alteration of the blood; perhaps even sometimes purpura *à frigore*, purpura of rheumatism, &c., arise from blood-dyscrasia leading to intravascular coagulation, clots by precipitation, or capillary embolisms. As to the nature of the alterations of the blood, many authors speak of the too great fluidity of the blood; but the quantity of fibrine, far from being diminished, is frequently increased in purpura. The author would group the pathogenic causes of purpura thus.

A. Purpura from Modification of the Vessels.— 1. From perturbation of the capillary circulation, whatever its origin, leading to active or passive hyperæmia, producing hæmorrhage by diapedesis or by vascular rupture. 2. Purpura télangiectasique of Cornil. 3. Purpura from primary alteration of the vascular walls, and consecutive rupture of these walls.

B. Purpura from Modifications of the Blood.— 1. Too great fluidity of the blood? (purpura by diapedesis). 2. From vascular obstructions determined by certain elements contained in the blood leading to the formation of thromboses and embolisms. This purpura might occur from simple diapedesis, it is more often hæmorrhagic infarction of the skin. *a.* From formation of clots in blood-dyscrasiæ. *b.* From embolism formed by white corpuscles (leucocythæmia, &c.). *c.* From embolisms formed by bacteria or micrococci (septic diseases, &c.). *d.* from embolisms formed by altered blood-elements?

C. Purpura Nervosa. — In practice, however, many cases will not fall completely into either group; very often the origin seems to be complex. Alteration of the blood, troubles of the circulation, vascular lesions, disturbances of innervation, all causes of cutaneous hæmorrhage, may coexist in the same subject. In all probability, even dyscrasic purpura may be in certain cases the origin of secondary vascular lesions, of secondary endarteritis. And it is probable that alteration of the blood often modifies the action of the vaso-motor nervous apparatus, central or peripheral. In studying a case of purpura, it must not be forgotten, then, that its pathogenesis may be complex. The relative importance of the different causes must be sought; and an attempt must be made to determine the relations between the determining primary or predisposing causes and the occasional or secondary causes.

G. D'Arcy Adams, M.D.

At the recent annual meeting of the British Medical Association in Belfast, Dr. Austin Flint, of New York, Professor Panum, of Copenhagen, Professor Helmholtz, of Berlin, and Dr. Robert Koch, of Berlin, were, on the recommendation of the Council, elected honorary members of the Association.

Article 3035.

VIGOUROUX ON THE POLARISATION OF THE HUMAN BODY AND OF ELECTRODES.

Dr. Romain Vigouroux (*Le Progrès Méd.*, 1884, No. 26) says that Dr. De Watteville, in a recent note, has drawn attention to the fact that if, after a current of electricity has been passed for some time through the human body, it be reversed, it undergoes an increase shown by the galvanometer. This increase, he says, must be due either to a diminution of resistance in the circuit, or to an additional electromotive force in the body and electrodes. He dismisses the latter supposition as unfounded, because the body and electrodes, when placed in connection with a galvanometer, give rise to no current; while it cannot be due to diminished resistance, as after a short time the needle returns to its original position. Dr. Vigouroux says the same observation has been made by others, including Erb, but no explanation has been afforded. He offers the following simple one. He disputes the fact that the body and electrodes generate no current; for if, after passing a current through the body, the action of the pile be suppressed without interrupting the current; (by turning the collector to o), the galvanometer still indicates the passage of a feeble current. Then, if the current be opened, the needle passes to zero; so that there is produced during the passage of the current an inverse electro-motive force, strong enough to give, in spite of the resistance of the body, a notable deviation of 4 to 10 ten-thousandths of an ampere. The seat of this current is in both body and electrodes, but chiefly in the latter, as may be shown by putting the electrodes in contact. This is true of carbon electrodes covered with chamois leather and wetted with ordinary water, also of sponge electrodes, and of metal ones covered with linen. The electro-motive force due to the polarisation of the skin is much more feeble and difficult to determine. In fact, he failed to obtain decisive evidence of its existence with very delicate apparatus, and he thinks it may be left out of account. The phenomenon, therefore, is accounted for thus: the polarisation of the electrodes goes on increasing up to a certain limit during the passage of a current, and the inverse electro-motive force which results from it has the same effect as an increase in resistance. When the current is reversed, this accessory resistance disappears, and the current of polarisation is added to the principal current. We can understand, therefore, why the reversed current shows a decided augmentation, because of the absence of the diminution due to the inverse current, and of the addition of this inverse current to the primary current reversed. After a time a new inverse current is determined, which brings about anew the same series of events.

Robert Saundby, M.D.

Article 3036.

KANZLER ON THE OCCURRENCE OF TUBERCLE-BACILLI IN SCROFULOUS LOCAL AFFECTIONS.

Kanzler (*Berliner Klinische Wochensch.*, 1884, Nos. 2 and 3) has examined the tissues, caseous material, and discharges from a number of local scrofulous affections, for tubercle-bacilli. He used as a staining fluid a solution of fuchsin in aniline water, in which the dried and heated preparations were kept twenty-four hours. They were decolorised in dilute nitric acid (1 in 3), stained again with methyl blue washed in distilled water and alcohol and mounted in Canada balsam diluted with turpentine.

The following is a summary of the results.

1. Out of 4 cases of osteomyelitis and osteo-synovitis, in which the fungous masses from the excised joints were examined, bacilli were present in all the preparations, forty in number.

2. Of 31 cases in which the secretions of local scrofulous affections were examined (in all 213 preparations), bacilli were found in 14 instances only. These were as follow:—

a. Excised lymphatic glands: 7 cases—2 positive, 5 negative.

b. Joint and bone diseases: 13 cases—8 positive, 5 negative; of which (*a*) chronic periostitis, 2 cases—1 positive, 1 negative; (*β*) fungous ostitis and osteo-myelitis, 5 cases—2 positive, 3 negative; (*γ*) tubercular and fungous joint diseases, 6 cases—5 positive, 1 negative.

c. Skin-diseases: 7 cases—4 positive, 3 negative.

d. Affections of the nasal mucous membrane: 2 cases—negative.

e. Purulent catarrh of the middle ear: 2 cases—negative.

Where present, the bacilli were much less numerous than in phthisical sputa.

It should be mentioned that none of these cases had definite evidence of pulmonary phthisis. He thinks that scrofula and turberculosis must be regarded as two different things, for the following reasons. In only a small number of local scrofulous diseases were bacilli present, while in a large series of cases they have never been shown to exist at all, such as in simply hyperplastic scrofulous glands, in scrofulous eczema, impetigo, conjunctivitis, middle ear catarrh, &c. In no cases of congenital scrofula have bacilli been seen; for example, in young infants with abnormally irritable mucous membranes and tendency to catarrhal affections. Inoculation experiments with tubercle have always produced tuberculosis, and never anything like general scrofulosis. While there is no doubt that tubercle readily develops upon a scrofulous basis, it may also develop in quite other conditions.

It may be open to dispute whether, in a given local affection, the cause was the introduction of tubercle-bacilli, or whether it was primarily scrofulous. Further investigations are needed to clear up the complex relationships of the two diseases.

For diagnostic purposes, it is plain that only in a few cases would such investigations as those related in this paper be worth any one's while; and the results show how much care is needed to find bacilli even when present, so that the value of negative results is very doubtful. In some cases of joint-disease, it might be proper to make an exploratory incision under antiseptic precautions, and examine the contents of the cavity under the microscope.

Robert Saundby, M.D.

Condensed Mares' Milk.—In the *Med. Times and Gazette*, May 1884, p. 736, an article alludes to the introduction of condensed mares' milk by a firm of manufacturers from Russia. Last year was the first of regular work. It is sold in tins weighing ten ounces each. The analyses of Dr. Vieth confirm the statements of the manufacturers, that not more than 3 per cent. of cane-sugar is added, and that the milk has been condensed to one-eighth of its volume, *i.e.* to one-sixth of its weight.

Article 3037.

PETRONE ON SEPTICÆMIA.*

In the course of the winter of this year, Professor Petrone has been experimenting on the blood and serum expressed from the tissues of all patients dying from virulent septicæmia in a Hospital for Incurables. One portion of the blood and of the serum, just as it was collected, was injected under the skin of rabbits. Another portion, boiled and thoroughly filtered, was injected in other healthy rabbits. A certain quantity of this same liquid, boiled, was introduced into clean disinfected tubes, containing a little beef-broth ; the opening was closed hermetically with the spirit-lamp. These tubes were maintained for five days in a stove at 37–39° C. The animals into whom the boiled liquid was injected all succumbed, after presenting the same symptoms as those in which the unboiled septic liquid was injected. Necropsy showed the same lesions ; and, what is remarkable, the microscopic examination of the blood and of the serous and intestinal fluids revealed the existence of identical micro-organisms in great numbers, as much in the first as in the second series of animals subjected to experiment. The sole manifest difference was, that to cause death it was necessary to inject a cubic centimètre of the boiled liquid, while one drop only of the fresh blood was sufficient. The liquid contained in the tubes, under conditions favourable to fermentation, did not become at all turbid ; and, examined under the microscope by Weigert's process, showed neither bacteria nor living spores. The blood of the animals dying from the injection of the liquid, whether boiled or not, injected in its turn in other rabbits, gave rise also to death by septicæmia. In the same manner the blood of this second series behaved in regard to a third series. To completely insure the destruction of all parasitic organisms, the septic fluid from the human body was exposed for three hours to a temperature of 120 to 140° C. With this liquid, injections were made with fresh disinfected instruments in other animals, and with another portion cultivations were made as described above, and part was subjected to microscopical examination. The results were, that in the liquid simply boiled and in the cultivated fluid there were no micro-organisms. On the other hand, in the interstitial fluids and in the blood of the animals which succumbed to the boiled septic poison, the same organisms were found as existed before boiling. The alterations met with in all the animals were those of ordinary septicæmia, and need not be described. What are the consequences that can be deduced from these facts ? The proximate consequence is, that in septicæmia the bacteria are not a primary but rather a secondary fact ; the virus of septicæmia is most probably represented by a chemical poison. Then the remote consequence is this ; the bacteria in septicæmia are a secondary fact, but not without importance ; in other terms, the bacteria acquire their virulent property through a chemical ferment contained in the septic fluid. This last conclusion leads to the conception of the pre-existence in the animal organism of ordinary schizomycetes, innocuous, but which in the presence of septic poisons become transformed into pathogenic bacteria ; and to the fact, experimentally demonstrable, that the bacteria only are able to develop in the animal organism the poison in question. Of these two consequences, Petrone holds that the first is the most acceptable, the most logical and capable of demonstration ; the second is opposed to reason and common sense. The doctrine of transformation is contrary to the laws of nature ; and the theory which maintains that the bacteria may give rise in the animal organism to the septic poison, although sustained by eminent authorities, is not free from doubt. This doctrine, however, is that which is in most favour in Germany and America. G. D'Arcy Adams, M.D.

* Experimental Researches on Septicæmia. (*Lo Spallanzani*, May, and *Gazz. Med. Ital. Prov. Venete*, June 28, 1884.)

Article 3038.

CAMPBELL ON ESCAPES AND UNLOCKED DOORS.

Dr. J. A. Campbell, the medical superintendent of the Cumberland Asylum, has an amusing paper in the *Journal of Mental Science* for July 'On Escapes, Liberty, Happiness, and "Unlocked Doors," as they affect patients in asylums.' From his asylum at Carlisle, in the interest of his adopted country, Dr. Campbell steps forward to check the inroad of Scottish ideas across the English border. The Scotch have already seized upon an old possession of theirs. The committee of management of the asylum of the Isle of Man, dissatisfied with their superintendent for reasons which they did not desire to present to public criticism, induced him to resign, in order to make way for a new superintendent from Scotland, who was presumed to be better fitted to carry out the boarding out system of lunatics so much praised in the north. The new superintendent, however, was selected from that part of Scotland where there are the fewest lunatics boarded out.

Dr. Campbell observes that we have to look at the question of unlocked doors from the standpoint of a medical man and of a relative, as well as from that of a philosopher or an asylum improver. He quotes from the fourteenth report of the Scottish Lunacy Board the following sentence. 'The list of deaths presents an unusual number from accidents, but it is satisfactory to be able to state that this unfortunate result is not due to any laxity of management, but mainly to an unfortunate concatenation of events. One was a suicide on probation, two were suicides from escapes, one of them through an open door, and one was a death from drinking carbolic acid, which had been left in an unlocked room in an asylum with 175 patients. If at Hanwell nowadays between two visits of the Commissioners 42 deaths of this sort occurred, which is in the same proportion, I am quite sure there would be some further explanation necessary.'

He quotes an entry of one of the Scotch Commissioners about eleven escapes registered in the Lenzie Asylum. 'They all either came back or were brought back. For some of them no search was made, as it was believed they were in safety with friends, and that they would return.' On this Dr. Campbell remarks : 'We, of course, understand that as no fault is found with this mode of dealing with escapes, it is officially approved of. Certainly it is not what was taught me when I was an assistant, or what I have practised as a superintendent, or inculcated on those who have medically assisted me ; and though patients may at times come back, or be brought back, they may quite well cause injury at home to

relatives, or even be an annoyance to the public; and when they do not come back alive, I for one think it does not look well even in print that it should be the recognised thing not to send after escapes.'

He quotes the instance of a female patient escaped from the Lenzie Asylum, Glasgow, through an unlocked door, who was killed on the railway near the asylum. The managers had to pay 50*l.* to avoid an action of damages from the husband.

Examining the meaning of such phrases as 'free communication,' 'free egress,' and 'unlocked doors,' Dr. Campbell treats them as merely misleading turns of expression, too liable to convey to the unwary public the idea that patients in asylums could leave them if they tried, and to add to the special delusions of the insane the general delusion that they are at liberty. In reality, remarks Dr. Campbell, what is called the unlocked door system of working an asylum is merely substituting human vigilance for the lock; the patient gains no more liberty. 'If the door, though open, is guarded, it is merely reproducing the sufferings of Tantalus, which may be good mental discipline for some patients, but is, I know, detrimental to others.'

'I have seen,' he goes on, 'restless melancholiacs, determined on self-injury, who resisted everything—dressing, undressing, feeding, &c.; who even in a day-room, with a door opening with the ordinary handle (for at Garlands portions of the interior of the asylum were worked without locks in 1867), would struggle to get through, and when the door was locked would at once subside and settle.'

The temptation to run away is so far effectual, that escapes are much commoner from lunatic asylums in Scotland than they are in England. Dr. Campbell does justice to this part of his argument. An escape, he insists, is sometimes a serious matter. 'The suicidal, the homicidal; the young wife unfit for the time to protect her own person; the erotic young girl anxious, owing to her state, to find a partner who shares her feelings and will indulge them.'

Comparing data collected from four asylums in the north of England, Carlisle, Northumberland, Newcastle (City), Durham, with four Scotch asylums, partially or wholly worked on the open door system, he finds the percentage of escapes to be in the English asylums 1·7, and in the Scottish ones 5·0. The percentage of recoveries at Garlands (Dr. Campbell's Asylum) was during ten years 47·7; he does not give the recovery rate of the other English asylums, nor the Midlothian Asylum; but the recovery rate of the other three Scottish asylums for the same period is lower than at Garlands, being 43·9 for the Fife Asylum, and 32 per cent. for the Argyll one. For Lenzie during five years the percentage of recoveries was 46·5.

The author concludes with some humorous remarks. 'We may have asylums in the future divided up into classes—viz., asylums for recovery with precautions and safety to life, asylums for recovery with moderate risks, asylums for recovery at any risk, freedom and excitement, shooting, boating, and ballooning, the true aids of recovery open to all.

'Can it be that some of the younger members of our department are striving to excel each other in carrying out notions so belauded by the Scotch Board of Lunacy? It would be well gravely to consider whether the discovery that lunatics should be punished like ordinary men is not the development of such fancies.' W. W. Ireland, M.D.

Article 3039.

NEWINGTON ON PROGNOSIS IN INSANITY.

Dr. H. Hayes Newington gives, in the *Journal of Mental Science* for July, the first part of an article on Unverified Prognosis. In many forms of insanity, to make a correct prognosis taxes the skill of the physician more severely than anything else. It is not easy to extract any maxims from the paper which are likely to be useful to another physician. The following seem to be the most instructive. 'We know from statistics that heredity by itself is slightly in favour of recovery from any first, second, or even third attacks; but we also know from experience and reasoning that on the closeness or directness of that predisposition much depends, and that in doubtful cases the scale would be turned the wrong way, in our opinion, by a knowledge that a parent had laboured under insanity, while we might not take much notice of an insane cousin.'

If the patient labouring under a predisposition to insanity become insane under a distinct exciting cause, such as a blow on the head or an attack of syphilis, Dr. Newington considers the prognosis to be grave.

Where proof of the actual existence of insanity at the time of the procreation of the patient can be obtained, it deprives the prognosis of the hopefulness which it might otherwise have worn.

When the insanity seems to grow out of the character of the patient by the exuberance of natural peculiarities, the prognosis is worse than where there is a complete change of disposition. 'Exaggeration can be brought about only by the lessening of control and reflection, and can be remedied only by a corresponding restoration of these, which are just the two elements that are most wanting when the disease is established.'

But might not exaggeration be the result of an increased irritability, or of greater keenness of appetites or desires, while the old resisting or inhibiting powers remained the same?

'Again,' proceeds Dr. Newington, 'if a patient's disposition has been completely changed, it is probable that this has occurred more or less rapidly; he may have the recollection of a former happy state, with which he can compare his present one. And still more important, if he can be brought near the edge of the pit into which he has fallen, and be induced to endeavour to extricate himself, he finds sound ground on which to step out. On the other hand, where the insane is merely an exaggeration of the sane habit, the reverse is the case.'

In the debate which took place after the reading of Dr. Newington's paper before the Medico-Psychological Association, Dr. Savage remarked that 'there were certainly classes of patients who seemed incurable. Such were cases of delusional insanity, with hallucinations of all the senses, persons believing that they had galvanic batteries inside them; persons who believed that smells and fæces were always being poured into their rooms, and so forth. Still, in cases where he had given very bad prognoses, the patients did get well.

'With regard to the question often asked, Do you think this person will have a recurrence? he might say that in the more acute cases, and the cases in which what had been called "brain-fever" the acute delirious mania had occurred, his opinion

was that they were less likely to recur than others. Then, were cases more likely to recover, because the cure was rapid. One read in text-books that the prognosis was worse when the patient got well rapidly. He feared that was a fallacy, or, at all events, a question for further consideration.'

W. W. Ireland, M.D.

Article 3040.

NOBEL ON IODOFORM-FORMING BODIES IN THE EXPIRED AIR OF DIABETICS.

As is well known, Petters, Kaulich, and others have found acetone, revealed by its peculiar odour, in the expired air, the urine, and the blood of diabetics. Later investigations have proved its presence in the urine by chemical reactions, but methods for recognising it in the expired air were less available.

Several new acetone reactions having been recently discovered, Dr. Nobel attempted to obtain results more accurate than have been obtained hitherto. The urine of a diabetic patient contained no acetone on examination ; but, some days after an exclusive fish-diet was begun, it contained large quantities. The expired air was thus examined. It was first conducted into a Woulff's bottle filled with distilled water, and after half-an-hour a solution of iodine in iodide of ammonium and liquor ammoniæ was added. By the next day a yellow precipitate was seen at the bottom of the flask, which on microscopic examination showed the iodoform tablets most clearly. On the other hand, the urine of another diabetic patient, which only gave a weak acetone reaction, showed only a slight separation of iodoform.

On another occasion, the air was passed through the water for an hour, the latter was distilled for six hours in a water bath at 58° C. (146°·4 F.), and the distillate was divided into three equal portions. To one the above-mentioned test solution was added, and a copious precipitate of iodoform obtained. To the second a few drops of mercuric chloride were added, and then enough caustic potash to render it alkaline ; it was then filtered, and ammonium sulphide added ; this caused a black precipitate of sulphide of mercury (Gunning's reaction). The third portion yielded a positive result with sodium nitro-cyanide and liquid ammonia (the acetone test of the author).

No doubt remained that the iodoform-making substance was acetone. Continued distillation for an hour gave no more acetone, though the iodoform reaction revealed 1·10,000th of a milligramme.

On another occasion the distillation was made at the temperature of 80° C. (176° F.) ; and after twelve hours the neutral distillate, which gave distinctly the iodoform reaction, was treated with spongy platinum, and the presence of acetyl-aldehyde at the beginning of oxidation was proved by the reduction of ammonia-silver solution, and by the colour-test of the author (sodium nitro-cyanide, caustic potash, and acetic acid). By further oxidation acetic acid was formed, which reddened blue litmus-paper held over it ; by careful neutralisation with very dilute caustic soda, a red colour, which was destroyed by dilute sulphuric acid, was obtained with ferric perchloride. Thus, beside acetone, ethyl-alcohol was found in the air expired by this patient.

Regarding the destiny of alcohol in the animal organism, according to some it is oxidised for the most part, and therefore must have a nutritive value ; while, according to others, the greater part of it is excreted, unaltered, by the kidneys, skin, and lungs. However this may be, it is evident that no conclusion can hence be drawn as to its behaviour in the bodies of diabetics, in whom the oxidation-processes are altered so much owing to irregular tissue-changes. The alcohol formed in such subjects may possibly be excreted unaltered for the most part, which would agree with the above results.

E. J. Edwardes, M.D.

Article 3041.

UHTHOFF ON ALTERATIONS OF THE RETINA IN ALCOHOLISM.

The author (*Berliner Klin. Wochensch.*, June 23) examined 360 patients in the Charité Hospital, who had been admitted for the treatment of the consequences of alcoholism, under the care of Dr. Westphal and others.

In 14 per cent. a slight uniform cloudiness of the retina was observed, most marked about the papilla, the inner half of which was not so distinctly outlined as the outer. No alteration of visual acuteness appeared to accompany this appearance, which has been already remarked by Klein, Borysiekiewicz, and others.

In 17 per cent. there existed an (atrophic) pallor of the outer half of the papilla, or, more accurately, of wedge-shaped sectors of the outer half. This appearance is regarded by the author as 'an important and fully justified diagnostic aid in the diagnosis of alcoholism.' This appearance is well known to ophthalmologists, and Leber especially has described it. But the author brings forward two facts concerning it. 1. It appears in sectors mentioned above. 2. It may occur most unmistakably without amblyopia existing at the time, and without any history of previous amblyopia. This was the fact in at least half the cases, but no doubt amblyopia had existed at some previous time. The author examined 1,400 mentally affected patients, and whenever he found this appearance, there was alcoholism, as was verified in 200 women. Pallor of the whole disc was only found four times (1 per cent).

Other poisonous agents which cause central scotoma with amblyopia (tobacco, lead, retrobulbar neuritis, &c.) occasionally cause an atrophic pallor of the temporal half of the disc ; and the author found it in healthy subjects to the extent of 1 per cent. without being able to account for it. But this does not lessen its diagnostic value ; such poisonous effects are rare compared with the results of alcoholism, and the history is usually clearer.

The author made *post mortem* examination of the optic nerve in two cases of undoubted alcoholic amblyopia, where the history and subjective symptoms were quite clear, and where the ophthalmoscope had revealed the above appearance. Partial atrophy of the optic nerves was found. The degenerated parts showed a great increase of interstitial tissue, with considerable increase of nuclei, new formation of vessels (some of them with thickened walls), and lastly, atrophy of the nerve-fibres. The degeneration, pursued backwards along the optic nerve, lost its wedge-shaped form and became oval ; it also left the periphery and occupied the centre of the nerve. It was also found in each half

of the chiasma, and in the inner parts of the optic tracts. These appearances accord with those found by others (Bunge, Vossius). In one of these two cases, there had been a gradual paralysis of the lower limbs, with wasting and alteration of electric excitability, and here Moëli found partial degeneration in both crural nerves.

In conclusion, the degeneration of the optic nerve in alcoholism is evidently related to degeneration of various other nerves of the body.

[The last two sentences remind us of Dr. Broadbent's recent paper 'On a Form of Alcoholic Spinal Paralysis,' read before the Royal Medical and Chirurgical Society on Feb. 12.—*Rep.*]

E. J. Edwardes, M.D.

SURGERY.

RECENT PAPERS.

3042. Pollock.—The Use of Opium as an Aid to Surgery. (*Brit. Med. Jour.*, April, p. 799.)

3043. Wells, Sir Spencer. — Pneumotomy. (*Brit. Med. Jour.*, June, p. 1117.)

3044. Chavasse.—A Case of Gastrostomy. (*Brit. Med. Jour.*, June, p. 1085.)

3045. Anderson.—A Case of Pyelo-Lithotomy. (*Brit. Med. Jour.*, June, p. 1092.)

3046. Symonds.—Gowan's Osteotome. (*Brit. Med. Jour.*, June, p. 1118.)

3047. Will.—A Case of Avulsion of the Right Arm and Scapula. (*Brit. Med. Jour.*, June, p. 1135.)

3048. Baker, Morrant.—A Case of Anthrax or Charbon. (*Brit. Med. Jour.*, June, p. 1134.)

3049. Sewill.—Loosening of the Teeth. (*Brit. Med. Jour.*, May, p. 1042.)

3050. Payne.—The Early Use of Antimony in Surgical Cases. (*Brit. Med. Jour.*, May, p. 1041.)

3051. Reeves.—Colotomy and Osteotomy. (*Brit. Med. Jour.*, June, p. 1252.)

3052. Younge.—Cellulitis of the Neck. (*Brit. Med. Jour.*, June, p. 1141.)

3053. Barwell.—The Treatment of Acute Inflammation of the Knee-joint. (*Lancet*, June, p. 1017.)

3054. Dobbin.—Strangulated Hernia in an Infant. (*Lancet*, May, p. 979.)

3055. Underhill.—Fracture of Ribs from Muscular Action. (*Lancet*, June, p. 1162.)

3056. Struthers.—A Case of Hernial Sac in the Linea Alba. (*Lancet*, June, p. 1079.)

3057. Cameron.—Wound of the Superior Longitudinal Sinus. (*Lancet*, May, p. 931.)

3058. Hardie.—Adherent Ulcer. (*Lancet*, May, p. 879.)

3059. Parker.—So-called Strangulated Omental Hernia. (*Lancet*, May, p. 881.)

3060. Walsham.—Two Cases of Tubercular Testicle with Anomalous Symptoms. (*Brit. Med. Jour.*, May 1884, p. 855.)

3061. Marshall.—Dentigerous Cyst of Lower Jaw. (*Chicago Med. Jour.*)

3062. Bowden.—Incontinence of Urine. (*Lancet*, May, p. 831.)

3063. Cameron.—Gouty Tumour of the Penis, and Galactocele. (*Lancet*, May, p. 841.)

3064. Smith.—The Use of the Actual Cautery in Joint-Diseases. (*Lancet*, May, p. 838.)

3065. Massey.—A New Method of Reducing Dislocation of the Lower Jaw. (*Med. Times and Gazette*, April, p. 583.)

3066. Spence.—An Unique Case of Conservative Surgery of the Hand. (*Med. Times and Gaz.*, April, p. 521.)

3067. Harley.—An Easy and Safe Method of Sounding for Impacted Gall-Stones. (*Brit. Med. Jour.*, May, p. 951.)

3068. Barker.—Popliteal Aneurism Cured by Digital Compression. (*Brit. Med. Jour.*, May, p. 947.)

3069. Rupture of Both Quadriceps Extensor Tendons. (*New York Med. Jour.*, Dec. 29, 1883.)

3070. Kirmisson.—The Treatment of Inguinal Aneurism. (*Union Méd.*, No. 87, 1884.)

3071. Fraser.—A Case of Dislocation of the Liver. (*Glasgow Med. Jour.*, Dec. 1882.)

3072. Bergmann.—Traumatic Aneurism of the Subclavian Artery. (*German Surgical Congress*, 1884.)

3073. Gordon.—Pott's Fracture. (*Dublin Journal of Med. Science*, April.)

3074. Gunn.—The Philosophy of Manipulations in the Reduction of Hip and Shoulder Dislocations. (*Chicago Med. Jour. and Examiner*, 1884.)

3075. Lesser.—Stretching of the Intercostal Nerves. (*Deutsche Med. Wochensch.*, No. 20, 1884.)

3076. Madelung.—A Modification of Colotomy. (*German Surgical Congress.*)

3077. Hache.—The Pathology of Cystitis. (*Revue de Chir.*, No. 4, 1884.)

3078. Grundler.—The Temperature of the Body in Cases of Simple Fracture. (*Mittheilungen aus der Chirurgischen Klinik zu Tübingen.*)

3079. Stimson. — Arterio-Venous Aneurism of the Common Carotid Artery and Internal Jugular Vein. (*Amer. Jour. of the Medical Sciences*, April 1884.)

Art. 3042. *Pollock on the Use of Opium as an Aid to Surgery.*—Mr. George Pollock, in the *Brit. Med. Jour.*, April 1884, p. 799, records a few observations on the use of opium in surgical practice. Opium has a great influence, not only in arresting secretion, but in helping to restore healthy action in most conditions of ulceration and sloughing; in giving tone and support under many circumstances, and especially in soothing and quieting the nervous system in gangrene or mortification of the extremities. It is in the various conditions of gangrene that opium may be said to stand alone as useful and powerful for good. In cases of sloughing and ulceration of the mouth in children of the lower classes, a few drops of laudanum every three or four hours until the child becomes drowsy—the dose only to be omitted while drowsiness lasts—is one of the most satisfactory methods of treatment. A few remarks of caution are given when a continuance of the drug is necessary. Constipation is one of the evils to be guarded against, and a dose of calomel occasionally is requisite when opium is given continuously. Often it will be found that one form of opium cannot be tolerated, when another will effect all that is desired. Codeia is often useful as a sedative in bladder trouble, complicated with enlarged prostate, when other opiates fail to give comfort. The tendency on the part of the patient to continue the use of opiates must be borne in mind, as some patients continue the practice after it has ceased to be requisite. Mr. Pollock finds that Battley's sedative solution is often borne when other preparations of opium disagree.

3043. *Wells on Pneumotomy.*—In the *Brit. Med. Jour.*, June 1884, p. 1117, Sir Spencer Wells writes that he regrets he was unable to read an extract of a paper (published by him nearly forty years ago) at the meeting of the Royal Medical and Chirurgical Society, after the papers of Dr. Cayley and Dr. Biss on 'Drainage of Pulmonary Cavities' were read. When Sir Spencer Wells was a young assistant surgeon in the Royal Navy in 1844, he published the notes of a case in which a man, who had long pre-

sented the symptoms of phthisis, suffered from an abscess in the right axilla. This was taken for a suppurating gland and opened. Air escaped with the purulent matter, and it became evident that there was communication between the bronchial tubes and the opening in the axilla. Large quantities of matter resembling the expectoration of phthisical patients continually passed from the opening, which was left entirely to nature, the result being that the patient gradually improved in health, and the opening eventually closed. The patient was alive and well two years ago, when he must have been nearly 70 years old. In a case of gangrene of the lung which occurred about this time, Sir Spencer Wells says he remembers vainly urging the principal medical officer to make, or to allow him to make, an incision into the right lung. The principal object of the present letter was, however, to call attention to an extension of the surgery of the thorax beyond the incision and drainage of pulmonary cavities, and to give a very brief sketch of the experiments of Dr. Biondi, of Naples, upon extirpation of a lung. Dr. Biondi has performed total or partial excision of one lung upon sixty-three animals, all of which have recovered. Dr. Biondi admits that the cases of phthisis where the disease is limited to one lung only, or to part of one lung, must be rare, but contends that cases are occasionally met with where the operation might save a phthisical patient from death.—[In the LONDON MEDICAL RECORD, March 1882, p. 88, is an exhaustive review of Gluck's experiments upon animals, and in the *Lancet*, March 1884, p. 436, may be found the record of two cases where the lung was excised, one patient dying a few hours after, and the second living nine days. Another case is also mentioned by Dr. Kemlein, where he successfully resected a portion of the lung with a sarcomatous tumour.—*Rep.*]

3044. *Chavasse on a Case of Gastrostomy.*—Dr. Chavasse, in the *Brit. Med. Jour.*, June 1884, p. 1085, publishes a case in which gastrostomy was performed on a man, aged 52. The operation consisted of two stages; the first part consisted in dividing the abdominal wall by an incision four inches long, commencing opposite the ninth rib, and drawn parallel to the edge of the left rectus muscle. The peritoneum was opened half an inch externally to the linea semilunaris, and the anterior wall of the stomach at once exposed. With the object of drawing forwards the stomach-wall, a silver wire suture was passed in a longitudinal direction through the outer coats of the stomach, cut long, and its ends left projecting about the middle of the parietal incision. Two silk sutures were passed above and two below this wire suture, transversely through the whole thickness of the abdominal wall, and the edges of the parietal incision were brought into direct apposition. The silver wire suture was left projecting considerably beyond the abdominal wall, and acted as a sufficient guide for the second part of the operation, which was completed nine days later, when the stomach was opened by a very small oblique incision, just internally to the wire suture.

3045. *Anderson on a Case of Pyelo-Lithotomy.*—In the *Brit. Med. Jour.*, June 1884, p. 1092, a case of pyelo-lithotomy is recorded as having been read before the Clinical Society by Mr. Anderson. The patient, aged 20, had suffered for nine months from hæmaturia and pain in the left loin, aggravated by exertion, and relieved by rest. On Sept. 10, 1883, under strict antiseptic precautions, an oblique incision was made, three and a half inches in length, parallel to, and three fingers' breadth below, the eleventh rib. On exposing the kidney a stone was detected, by digital exploration, in the pelvis of the organ, and was reached by incision of the membranous wall of the duct. The calculus was dislodged by the finger. A drainage-tube was inserted, and the wound closed with silk sutures. The urine escaped through the wound in small quantities during the first twelve or eighteen hours, after which the whole of the secretion was passed naturally. About five weeks after the operation the wound had become reduced to a superficial sore, and the patient could get up and walk without pain. The calculus weighed sixty grains when entire, and consisted chiefly of calcium-oxalate. The case was referred to as the eighth of the published examples of operation for removal of a stone from the kidney by incision through the healthy parietes. Of the eight cases seven were successful; one ended fatally. In six cases the stone was reached by section of the renal substance; in two by incision of the pelvis renalis; severe hæmorrhage resulted in two of the former, but was checked by pressure. The cure was perfect in the cases of recovery, and in no instance was permanent urinary fistula a sequel. The name of pyelo-lithotomy was proposed to distinguish cases in which the stone was extracted through an aperture in the pelvis renalis from cases of nephro-lithotomy, in which the renal parenchyma was incised for the same purpose.

3046. *Symonds on Gowan's Osteotome.* — Mr. C. J. Symonds writes in the *Brit. Med. Jour.*, June 1884, p. 1118, that in two recent operations he has found the greatest benefit in using Mr. Gowan's osteotome. The main points in the instrument are, that it grasps the bone and holds it firmly; the saw can be used so as not to play beyond the bone, and thus all injury to the soft parts is avoided. It is a most useful instrument for resecting bone at the bottom of deep cavities. It is well adapted for dividing the neck of the femur in excision of the hip, and resecting the ends of the bones in operation for ununited fracture.

3047. *Will on a Case of Avulsion of the Right Arm and Scapula.*—Dr. Ogilvie Will, in the *Brit. Med. Jour.*, June 1884, p. 1135, reports the case of a girl aged 18, who had her right arm torn off at the shoulder-joint by a flax-spinning machine. On examination, it was found that the scapula had been drawn through the wound at the shoulder. The wound was somewhat slit-like in appearance; there was no hæmorrhage, although the whole scapula was torn away, with the exception of one or two very small fragments. The acromial end of the clavicle was removed by bone-forceps. The wound was well washed with 1 in 20 carbolic lotion, and a drainage-tube inserted. The edges of the lacerated parts were brought together by silver wire, and a dressing of salicylic wool applied. The patient made a good recovery in three weeks.

3048. *Baker on a Case of Anthrax or Charbon.*—Mr. Morrant Baker, in the *Brit. Med. Jour.*, June 1884, p. 1134, records the case of a man, aged 42, suffering from 'charbon' with external symptoms (malignant pustule). On March 26 the patient handled two heavy bales of hides from China. The next day he noticed a small hard swelling below and behind the right ear. This swelling increased considerably, causing considerable pain. On April 4 a cluster of 'vesicles' appeared. The next day the

patient vomited, and felt very ill. On April 7 he was admitted into the hospital, and Mr. Baker made a free incision round the 'pustule' at a distance of a quarter of an inch from its margin, removing it to a depth of half an inch. An incision was also made into the neighbouring glands, as they were much inflamed. The wounds were dressed with carbolic acid and sanitas oil (1 in 30) dressings. The patient soon felt comfortable, and made a rapid recovery on an exclusively animal diet. This diet is recommended in cases of 'charbon' on account of the fact that the disease is not communicable to carnivora. A chromo-lithograph, taken from a drawing by the ward sister, is given, and also a plate of charbon as it is seen in the intestinal mucous membrane.

3049. *Sewill on Loosening of the Teeth.*—Mr. H. Sewill, in the *Brit. Med. Jour.*, May 1884, p. 1042, alludes to a disease which is on the increase at the present time, and characterised by a chronic wasting of the alveoli. The symptoms commence with inflammation of the free edge of the gums and the alveolar periosteum. The gums and alveoli slowly waste until the teeth are lost. The teeth are commonly of good structure and free from caries. There is in many cases deposit of tartar on the denuded surface of the root, and beneath the swollen and loosened margin of the gums. As a rule, several teeth are affected at the same time. The disease commonly shows itself about middle life. It sometimes accompanies diabetes, and also gout, and cases of debility and anæmia. The treatment consists in periodically removing the tartar, and swabbing the necks of the teeth beneath the loosened gums twice a week with pure carbolic acid.

3050. *Payne on the Early Use of Antimony in Surgical Cases.*—Dr. H. Payne, in the *Brit. Med. Jour.*, May 1884, p. 1041, writes that antimony is one of the drugs that has a similar action upon different persons suffering from different diseases, whatever may be their constitutional peculiarities. In antimony we have a drug, the physiological action of which produces just the opposite condition to that we have in the early stages of inflammation—viz., a diminution in the quantity of the blood sent to the part, and a retardation of its flow. Dr. Payne's theory is to treat a patient who has met with any injury or fracture, at the very outset, just as if he were already suffering from inflammation: by this means you often prevent the attack and hasten the recovery. By giving fifteen minims of antimonial wine every four hours, combined with ten minims of opium in some cases, one saves a great deal of risk from subsequent inflammation in cases of surgical injury.

3051. *Reeves on Colotomy and Osteotomy.*—Mr. H. A. Reeves, in the *Brit. Med. Jour.*, June 1884, p. 1252, draws attention to the operation of colotomy. During the last fifteen years the author has performed thirty-nine lumbar and fourteen inguinal colotomies. Of the thirty-nine lumbar operations, thirty-six survived for periods varying from seven or eight months to as many years. The reason of the author's success is attributed to his principle of always advising early operation. Reference is also made to recent cases of Macewen's osteotomy in which the popliteal vessels have been wounded. Mr. Reeves recommends diaphysal osteotomy, as pointed out by him in a paper in the *Journal* (November 1881, p. 935) under the heading of 'Femoral Osteotomy.' A chapter is devoted to this subject in a shortly forthcoming book on *Practical Orthopædics*. Colotomy and osteotomy form two of the most important practical subjects for discussion at the International Medical Congress at Copenhagen, and the author hopes that, by drawing attention early to the subject, a more earnest discussion may be the result. The author concludes his paper by stating that his colotomies and osteotomies are done without Listerian precautions.

3052. *Younge on Cellulitis of the Neck.*—Mr. G. H. Younge, in the *Brit. Med. Jour.*, June 1884, p. 1141, publishes a paper dealing with the causes, symptoms, pathology, and treatment of cellulitis of the neck. With regard to treatment, the author recommends a good purgative at the commencement, then to keep up the patient's strength by a mixture containing chlorate of potash and perchloride of iron, or nitric acid with decoction of cinchona. At the same time plenty of milk, beef-tea, raw eggs, and brandy. Overstimulation must, however, be avoided, and the quantity of brandy regulated by the amount of asthenia present. Local applications should also be applied, and as soon as pitting on pressure sets in, free and deep incisions should be made into the cervical fascia. In making the incisions it is necessary to remember the anatomy of the neck, and the author gives a diagram, taken from one by Mr. Croly, in his pamphlet on cellulitis of the neck, in which the lines of safety and danger are well shown. Hilton recommends to make an incision through the skin with a scalpel; then to pass a pair of forceps through the cervical fascia, tearing this structure by forcibly opening the blades.

3053. *Barwell on the Treatment of Acute Inflammation of the Knee-Joint.*—In the *Lancet* June 1884, p. 1017, a lecture by Mr. Barwell is published, in which the author draws attention to a method of treating severe inflammations of joints, but more especially those of the knee. In a sprain or wrench of a previously healthy joint, a severe attack of synovitis follows, with pain and swelling, but if dislocation takes place, no such symptoms follow, for the torn and synovial membrane permits the hypersecretion of the inflamed membrane to drain away, and thus relieves the tension. Acting on this doctrine, the method adopted by Mr. Barwell is as follows. Suppose the knee to be the injured joint, it is to be enveloped in a broad bandage of elastic webbing; or, if that be at the time unattainable, an ordinary calico bandage will answer the purpose, care being taken to leave between two of the turns a little interval on the inner side on a level with the upper margin of the patella. At this point there is passed into the joint a tubular needle, thoroughly cleansed and asepticised. The fluid runs away as a rule easily, and when the flow has ceased the needle is withdrawn, the puncture covered with strapping-plaster, made adherent by spreading on it turpentine (a potent aseptic), and this is to be painted over with collodion. Pressure by means of strapping-plaster must then be applied, and the limb placed at rest on a splint for a few days. Mr. Barwell strongly urges that, in all cases, joints which show evident marks of tension should be evacuated in the above manner. Four cases are cited in which puncture was performed, the results being that in a few days the patients were convalescent.

3054. *Dobbin on Strangulated Hernia in an Infant.*—Dr. Dobbin, in the *Lancet*, May 1884, p. 979, records a case of strangulated hernia in a child six months old. When first seen, constipation

had existed for two days. On examination, a tumour was found in the right scrotum which could not be reduced; poultices were then applied for about four hours; then taxis was tried under chloroform. This produced much diminution in the size of the tumour, so that the testicle could be distinctly felt, but a firm swelling remained in the groin. It was decided to operate on this at once. The sac was reached without difficulty, and reduction being still impossible, the sac was opened, when a quantity of blood-stained serum escaped, exposing a knuckle of dark-coloured intestine which was tightly constricted at the external ring. The stricture was carefully notched and the bowel returned. The wound was dressed with carbolised lint and a pad. About an hour after the operation the child passed a copious motion of healthy but very offensive fæces. Recovery was complete in fourteen days. The case is recorded to show that, when taxis fails, delay is dangerous, and to urge practitioners to operate early, even though they have to perform the operation in a labourer's cottage.

3055. *Underhill on Fracture of Ribs from Muscular Action.*—Mr. Underhill, in the *Lancet*, June 1884, p. 1162, narrates the case of a strong man, aged 54, who was engaged in demolishing a brick-kiln by means of a sledge-hammer, which weighed a little over eight pounds. Whilst working in a narrow part, with only just enough room to give his hammer its full swing, he missed his stroke, and suddenly twisted round, causing acute pain in the left side of the chest. On examination, it was found that there was fracture of the sixth, seventh, and eighth ribs on the left side, without any signs of external violence. There was no evidence of preternatural brittleness of any of his bones, the man being noted for his strength and muscular development.

3056. *Struthers on a Case of Hernial Sac in the Linea Alba.*—In the *Lancet*, June 1884, p. 1079, a short notice is given of a case of a hernial sac in the linea alba exhibited by Professor Struthers at a meeting of the Aberdeen Medico-Chirurgical Society, on May 1, 1884. It occurred in a man, aged 84, and was situated about midway between the umbilicus and ensiform cartilage. The size of the opening in the linea alba was about a quarter of an inch; the length of the sac external to the linea alba was about an inch.

3057. *Cameron on a Case of Wound of the Superior Longitudinal Sinus.*—In the *Lancet*, May 1884, p. 931, Dr. Cameron relates the case of a young man who sustained a compound depressed and comminuted fracture of the upper and central part of the frontal bone. At the time of the accident the trephine was applied, and a loose piece of bone, about three inches in length, was removed. About three years later the patient began to suffer from mental confusion and giddiness, and ultimately from distinct epileptic seizures. These gradually increased during the next four years, until the attacks recurred several times in one day. Careful examination at this time did not detect any aperture in the skull, but the scar was much depressed over the central and upper portion of the frontal bone. Dr. Cameron decided to trephine at this point, and carried a crucial incision through the scalp. From one point a profuse stream of dark blood began to pour out; and, on hastily raising the skin-flaps, it was seen that there had been a narrow slit in the skull through which the knife had gone, and had wounded the superior longitudinal sinus. A very slight pressure with a piece of lint controlled the bleeding, so that the piece of bone was able to be removed with the trephine. No renewal of the bleeding occurred after the wound was dressed, and it gave no further trouble. The case is published to show how a comparative slight degree of pressure will permanently control even alarming hæmorrhage from the sinuses of the dura mater. [Several very interesting cases of wounds of the cerebral sinuses are referred to in section 1408 : 2 of the *Medical Digest.—Rep.*]

3058. *Hardie on Adherent Ulcers.*—In the *Lancet*, May 1884, p. 879, a lecture by Dr. J. Hardie is reported, in which attention is drawn to the treatment of ulcers that have become chronic and refuse to heal, the cause being that the fascia under the skin has become adherent to the base of the ulcer, a thick fibrous tissue being thus formed, so that granulation and contraction are prevented. To these ulcers the author has given the name of 'adherent.' They are best treated by crucial incisions from soft skin on one side to soft skin on the other, taking care to go deep enough to divide completely the infiltrated tissue, and to expose the normal tissue beneath. The immediate effect of this operation is, that the elasticity of the thickened tissues will cause the edges of the incisions to spring apart, leaving an ugly-looking wound, which tends to increase for a few days, so that at the end of a week the ulcer may be of twice its original size, but having a healthy bright red granulating surface, which afterwards heals rapidly.

3059. *Parker on so-called Strangulated Omental Hernia.*—In the *Lancet*, May 1884, p. 881, Mr. Rushton Parker reverts to the subject of so-called strangulated omental hernia, as he feels persuaded that the symptoms attributed to mere incarceration of omentum are the symptoms of 'no such thing.' The attention of surgeons is directed to the investigation of the subject, which may be regarded under the two following heads; 1. the credibility, or not, of the idea that the mere constriction of omentum alone can possibly produce symptoms of intestinal obstruction in the face of habitual harmless ligature; 2. the explanation of the undoubted effect of herniotomy in relieving symptoms of intestinal obstruction attending cases of hernia in which omentum alone is incarcerated in the sac. In the *Lancet*, April 12, 1876, Mr. Parker states that it is inconceivable that any degree or sort of constriction occurring to omentum alone is capable by itself of bringing on symptoms of intestinal obstruction, seeing that the utter and deliberate strangulation of that structure by the surgeon's ligature is, in the absence of septic complication, absolutely never followed by 'symptoms' or by other evidence of harm.

3060. *Walsham on Two Cases of Tubercular Testicle with Anomalous Symptoms.*—Mr. Walsham, in the *Brit. Med. Jour.*, May 1884, p. 855, records two cases of enlarged testicle, one occurring in a man aged 52, simulating in many respects malignant disease, the other in a man aged 33, simulating syphilitic disease, and both on removal proving to be tuberculous. In neither were the usual symptoms, on which the diagnosis of tuberculosis is made, present; there was no enlargement of the epididymis, no adhesions of the skin, no sign of inflammation, no evidence of tubercle in the prostate, vesiculæ seminales, bladder, or kidneys, and with the exception of the faintest suspicion of mischief at one apex, no signs of any mischief in the lungs. The question

of diagnosis between tubercle and malignant disease should not often arise; but in cases with anomalous symptoms, the uniform consistency of the tumour, the absence of elasticity, the fibrous hardness on puncture, combined with the very small escape of blood, are signs which may aid us in distinguishing its tubercular character.

3061. *Marshall on Dentigerous Cyst of the Lower Jaw.*—Dr. Marshall, in the *Chicago Med. Jour.*, describes the case of a girl, aged 16, who came to him with a swelling over the first left lower molar tooth. Puncture showed that the swelling contained clear serum. Two months later, the swelling having much increased, it was laid freely open by an incision in the mouth. It contained about four ounces of thick dark yellow serum and some pus, with the undeveloped wisdom tooth, which was removed. The cyst had extended so far upwards and backwards as to nearly sever the condyle from the coronoid process and body of the jaw; the condyle was separated from its fibro-cartilage, and showed evidence of necrosis. The walls of the cyst were crushed, and the patient made a good recovery, with complete movement of the joint.

3062. *Bowden on Incontinence of Urine.*—Mr. Bowden, in the *Lancet*, May 1884, p. 831, recommends the following treatment for incontinence of urine in young subjects—viz., circumcision; after which a mixture containing bromide of potassium, tincture of cantharides, and tincture of sesquichloride of iron, three times a day.

3063. *Cameron on Gouty Tumour of Penis and Galactocele.*—Dr. Cameron, in the *Lancet*, May 1884, p. 841, records some rare surgical cases. The first is one of gouty tumour of the penis in an unmarried person past middle life. In the penis, about an inch from the pubes, was an oval, slightly flattened, and very hard tumour, about the size of a horse-bean. It was some time before the author recognised the nature of the disease, but, on reading Van Buren's *Surgical Diseases of the Genito-Urinary Organs*, he noticed a similar condition under the name of 'chronic circumscribed inflammation of the erectile tissue of the corpora cavernosa.' Dr. Cameron's patient had, in addition, a fibrous tumour or knot in the palm of the hand, due to a limited thickening of the palmar fascia. The coincidence of two similar affections in the hand and penis was striking, and led the author to conclude that both were due to a gouty diathesis. Another case was that of a man, over 30 years of age, who consulted Dr. Cameron with the view of having a hydrocele of the left tunica vaginalis tapped and injected. The patient had suffered from double hydrocele some years before, both sides having been tapped and injected, but only one was cured. On tapping the left side, which was of a large size, Dr. Cameron was surprised to find the fluid of milky whiteness; under the microscope there was no trace of spermatozoa, but the whiteness was found to be due to the presence, in great abundance, of fatty matter. Chemical analysis also revealed a slight trace of albumen and sugar. The term 'galactocele' has been applied to these cases, but, as the fluid does not possess the characters of milk, this name is likely to mislead. [Several similar cases to the above are noted in section 1225 : 6 of the *Medical Digest.*]

3064. *Smith on the Use of the Actual Cautery in Joint-diseases.*—Mr. Henry Smith, in the *Lancet*, May 1884, p. 838, points out that the use of the actual cautery is most desirable in many cases of chronic joint-disease. Attention is drawn to two instances of disease of the knee-joint occurring in females, where the effect of one application of the cautery had been remarkable; also to the case of a woman who had long suffered from disease of the dorsal spine. After the urgent symptoms had been relieved, Mr. Smith applied the actual cautery freely over the diseased vertebræ, and at the same time administered mercury internally, so as to produce ptyalism. The effects were almost immediate; pain was relieved in a few hours, and in the course of six weeks the patient left the hospital convalescent, having been previously fitted with a Sayre's jacket. The cautery should not be used in cases where acute inflammatory action existed until the acute symptoms have abated. It is especially in those cases where constant pain is a notable symptom, that the cautery has such good effect. [Several instructive papers by Mr. Syme and others are referred to in section 1716 : 2 of the *Medical Digest.*]

3065. *Massey on a New Method of Reducing Dislocation of the Lower Jaw.*—Dr. Massey, in the *Med. Times and Gazette*, April 1884, p. 583, writes that, by introducing the little finger into the ear, one can feel the joint of the lower jaw move quite easily. A case is related of a young girl, aged 16, who had noticed a contraction in the entrance to her right ear, which was caused two years previously by dislocating the jaw during a fit of yawning. Dr. Massey ordered the girl to force her little fingers into the ears whilst he manipulated with the articulation. The patient opened and shut her mouth rapidly six times, then a snap was heard, and the dislocation was at once reduced.

3066. *Spence on an Unique Case of Conservative Surgery of the Hand.*—Mr. Spence, in the *Med. Times and Gazette*, April 1884, p. 521, relates a case of conservative surgery in a girl, aged 18, a weaver, who had caught her hand in the cog-wheels of some machinery. The whole of the hand to the ulnar side of an oblique line, extending from the metacarpo-phalangeal joint of the index finger to the middle of the carpus, was reduced to a pulp. In fact, only the thumb, with the scaphoid, trapezium, and trapezoid bones of the carpus remained uninjured. Being reluctant to sacrifice the thumb, Mr. Spence adopted the following course. The remaining uninjured bones of the carpus were removed, and the whole of the injured metacarpal bones, leaving only the thumb and its metacarpal bone. Next, the articular surface of the proximal end of the metacarpal bone was brought into contact with the articular surface of the radius. The soft parts surrounding the thumb formed a good covering for the ends of the ulnar and radius, when united by sutures with the uninjured soft parts of the forearm. The wound healed well, and there was slight movement in the thumb after five weeks.

3067. *Harley on an Easy and Safe Method of Sounding for Impacted Gall-Stones.*—In the *Brit. Med. Jour.*, May 1884, p. 951, a report is given of a paper read at the Royal Medical and Chirurgical Society by Dr. George Harley, on a method for ascertaining the existence of impacted biliary calculi. A case is narrated in which it was successfully performed in the following manner. The patient, a lady, aged 36, was placed under an anæsthetic. A six-inch long French exploring trocar was inserted midway between the umbilicus and margin of the liver, an inch and a half to the right of the median

line. Its point being pushed upwards and backwards in the direction of the common bile-duct, no hard substance was met with. The instrument was withdrawn and reinserted an inch higher up, about two inches to the right of the umbilicus. On pushing it in the same direction as before, to the depth of six inches, its point struck into a hard substance. Twenty-seven days after this, the patient succumbed from an attack of enteritis and peritonitis. At the necropsy thirteen calculi were found in the gall-bladder. The paper ended with the following conclusions. 1. The presence of an impacted gall-stone may be readily as well as safely ascertained in the way described. 2. Not only the position, but even the size and shape of a biliary calculus, may be instrumentally ascertained. 3. A knowledge of these facts may possibly induce surgeons to undertake the earlier artificial removal of dangerously impacted gall-stones than heretofore, the fatality hitherto attending the operation being put down to the delay of it until the patient is exhausted.

3068. *Barker on a Case of Popliteal Aneurism Cured by Digital Compression.*—Mr. A. J. Barker, in the *Brit. Med. Jour.*, May 1884, p. 947, records the case of a man, aged 36, who was suffering from aneurism of the right popliteal artery. He had been carefully treated for five weeks with a Skey's tourniquet, applied almost continuously, but without effect. On Sept. 6, 1883, Mr. Barker ligatured the superficial femoral artery in Scarpa's triangle. The pulsation was by this means completely controlled, and the tumour gradually shrank. In Jan. 1884 the patient noticed a return of pulsation in the right popliteal space, and soon the aneurism was as large as before, although the femoral artery below the ligature was pulseless, as were also the tibials; and it was evident that the aneurism was fed by branches of the profunda, which had been presumably enlarged during the five weeks of instrumental compression of the femoral. On Jan. 26 the patient was put upon a somewhat restricted diet for two days, and smartly purged. On the 28th, digital pressure of the common femoral was commenced at 10.50 A.M. By 5.15 P.M., all pulsation in the aneurism had ceased. Compression was, however, continued till 8 P.M. The patient returned home on Feb. 5, and since then has followed his usual employment, that of a gardener.

3069. *Rupture of Both Quadriceps Extensor Tendons.*—In the *New York Med. Jour.*, Dec. 29, 1883, a case of this accident is recorded. The patient, ten years ago, fell, detaching the quadriceps extensor of the right side from the patella. Six years later he had another fall, and a similar accident occurred on the left side. The quadriceps extensor femoris on each side now appears to be quite absent, so that the finger can be thrust deeply behind the upper border of the patella. If the legs be flexed, he cannot extend them at all. In the *Philadelphia Med. News*, April 12, a case is also recorded of a patient, aged 72, who had ruptured both his quadriceps extensors by slipping upon a piece of ice, one knee giving way and the other tendon rupturing almost immediately afterwards. [Several instances of this accident are recorded in sect. 1758 : 3 of the *Medical Digest.*]

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3070. *Kirmisson on the Treatment of Inguinal Aneurism.*—According to the author (*Union Méd.*, No. 87, 1884) the treatment by compression is rarely successful while the ligature of the external iliac artery gives very good results; the operation has been performed 69 times within the last 28 years, and has been followed by death in 13 cases. This represents a mortality of about 19 per cent. The author recommends Astley Cooper's incision as less dangerous than any other.

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3071. *Fraser on a Case of Dislocation of the Liver.*—The *Glasgow Medical Journal*, for December 1882, contains a report by Dr. Donald Fraser, of Paisley, of an interesting case of transposition of the viscera with dislocation downwards of the liver. The patient, a middle-aged single lady, on April 20, in coming out of a bath fell backwards, and, while falling, made a violent effort to recover herself. After the immediate effects of the fall had passed off, she felt weak and had pain in the left side, with occasional attacks of vomiting, and pain and increased frequency in passing urine. These symptoms increased in severity until May 17, when she was seen by Dr. Fraser. In the course of a few days he found, on careful examination, a large smooth rounded swelling, which gave to the hand a feeling of solidity, occupying the lower half of the abdomen, chiefly on the left side. While it extended beyond the middle line, the greater part of it lay in the left iliac region, reaching into the hypogastric and left inguinal regions. The lower border was within an inch or so of the pubes, and the upper border was separated from the edge of the true ribs on the left side by an area of clear percussion which measured about three inches and a half. From its position and physical conditions, it at first gave the impression of being a tumour of the left ovary, but when its shape was made out and the notch felt in the hypogastrium, it was recognised to be the liver transposed and dislocated downwards. This transposition was found to be part of a general transposition of the thoracic and abdominal viscera. As soon as the true nature of the case was recognised, Dr. Fraser ordered a pad and bandage to be applied, so as to produce a continuous upward pressure on the lower surface of the liver. About the end of June the organ had moved upwards to an appreciable degree, and on July 4 the tumour had disappeared, its lower edge being felt underneath the edge of the left hypochondrium. At an examination made three months later, the liver was found in the left hypochondrium. The symptoms observed at the outset of this case were, Dr. Fraser states, largely of the nature of shock, and such as might have been expected from a traumatic dislocation of the liver. In all probability, there occurred at this time either a complete dislocation at once from the violent effort made by the patient in attempting to save herself from falling into her bath; or, what from the history is more probable, a partial dislocation, and its complete descent taking place some days afterwards. It is thought extremely probable that some degree of congenital laxity of the ligaments had existed in this case. Dr. Fraser concludes with some remarks on the curvature of the spine and the right-handedness noted in this case. 'There is here,' he states, 'a marked degree of lateral curvature of the spine and, as in many of the recorded cases of transposition, the convexity of the dorsal curvature is directed to the left instead of, as is usually the case, to the right. In this respect it gives support to the view of some anatomists, that the position of the aorta on the left side of the spinal column influences the almost universal direc-

tion of the convexity of both the normal and abnormal curvature of the dorsal portion to the right; and there is the further argument in this case, that the patient is right-handed. That is to say, the patient presents both the conditions which are supposed to determine the direction of the convexity of the dorsal curvature, and yet the curvature is in harmony with the position of the aorta, and not with the right-handedness. The existence of right-handedness is further of interest in connection with the hypothesis that it is due to the richer supply of blood to the left side of the brain through the straight course of the left carotid, and the consequent expectation that in transposition of the vessels there would be a tendency to left-handedness which, by the way, has not been the case so far as has been noted. If the truth of Broca's hypothesis be noted, then it must be concluded that heredicity and training, in at least many cases, overpower the vascular conditions.'

3072. *Bergmann on Traumatic Aneurism of the Subclavian Artery.*—At the thirteenth Congress, held in April, of the German Surgical Association, Professor von Bergmann reported the case of a man, aged 30, who in September of last year received a punctured wound in the left subclavian artery. This injury was followed by very profuse hæmorrhage, with extensive infiltration of blood in the anterior and lateral walls of the thorax on the left side. Nine weeks later, after the external wound had healed and the infiltration had disappeared, the patient presented under the left pectoral muscle a large pulsating tumour, which, through pressure on the brachial nerves, was causing much disturbance of sensibility. This aneurism was ultimately cured by digital compression above the clavicle, independently of any other mode of surgical treatment. In a discussion on this case, reported by Kramer of Berlin in a supplementary number of the *Centralblatt für Chir.*, No. 23, 1884, Volkmann stated that he had seen but one case of aneurism of the subclavian. This grew very rapidly, and was cured by double ligature of the vessel, which could be isolated above the clavicle. This surgeon suggested the probable necessity, in any case of a like nature, of performing osteotomy of the clavicle, in order to reach the seat of the arterial injury. Von Langenbeck, influenced by his experience, recommended the earliest possible operation in such cases, and ligature of the vessel above and below the aneurism, as compression often fails. Three cases which had been under his own care were then recorded. The first was that of a boy aged six, whose subclavian artery had been punctured by a penknife. Von Langenbeck, as he had been assured that only venous blood came from the wound, did not apply a ligature. Shortly afterwards the patient died, in consequence of secondary hæmorrhage. The subject of the second case was also a young lad, in whom a penetrating wound from a knife had caused a very considerable effusion of blood under the soft parts of the anterior wall of the thorax. The clavicle having been sawn through, the subclavian artery was tied above and below the seat of injury. The patient died from septic poisoning. In the third case the subclavian artery, together with the brachial plexus, had been wounded by a bullet from a revolver. There was but little external primary hæmorrhage, but a slowly increasing hæmatoma formed, from which there were repeated slight bleedings, which, after a time, became so frequent as to cause extreme anæmia. This blood-tumour having been laid open and cleared of numerous clots, two ligatures were applied to the subclavian artery. This patient made a good recovery, and at the time of this report was living.

3073. *Gordon on Pott's Fracture.*—Dr. Alexander Gordon, in a paper on 'Fractures of the Leg,' read before the Ulster Medical Society (*The Dublin Journal of Medical Science*, April 1884) states that, as there may be some difference of opinion as to what is meant by Pott's fracture, he would, in considering this lesion, restrict the term to that not uncommon form of accident in which the inner malleolus is broken off, with fracture of the fibula from one and a half to two and a half inches above the lower end of the outer malleolus. The foot is usually abducted and displaced outwards, with its inner border depressed, and the heel carried usually more or less backwards. The inner malleolus may be felt to be movable, and the border of the tibia from which it has been detached may be distinctly felt. On the outside the outer malleolus will be pressed outwards by the displaced foot, whilst the upper end of the lower fragment will be carried inwards and often forwards, producing a diminished transverse breadth of the leg at this point, with increased lateral diameter lower down, at the point of the malleoli. As this accident is caused by twisting of the foot outwards, or by forcible abduction, the following may be considered as different degrees of the same accident; 1, simple fracture of the fibula from one and a half to two and a half inches from its lower end; 2, Pott's fracture; and 3, dislocation of the tibia inwards, or the foot outwards. The simple fracture of the fibula constitutes the mildest form, Pott's fracture the more severe, and dislocation of the tibia inwards the most severe form. In simple fracture of the fibula the heel is usually displaced backwards, with widening of the inter-malleolar spaces. Whatever mode of treatment be adopted, the heel must be pressed forward and the foot adducted. By Dupuytren's mode of treatment, in which a thick pad is applied, extending along the inner side of the tibia to the malleolus, with a wooden splint extending beyond the foot, a sufficient extent of adduction may be gained to correct the deformity caused by the abduction; but this apparatus does not act sufficiently on the heel to bring it forward. The tibio-fibular articulation is the centre of the movements in these accidents. When the heel is carried backwards, the lower end of the lower fragment is carried backwards, while its upper end projects forwards. In addition to the lower end being displaced outwards by the abducted foot, the outer malleolar space is increased with diminution of the transverse breadth of the interosseous space at the seat of fracture. In the treatment of fractures of the fibula, no pressure should be made on any part of the shaft of the bone between the points at which it rests against the tibia. Hence, in the treatment advocated by the author of placing a Cline's splint along the outer side of the limb, one pad should be applied over the outer malleolus and outer surface of the foot, whilst the upper pad should rest upon the head of the fibula and above it, so that the whole length of the shaft of the fibula may be free and uncompressed. Care should be taken in Pott's fracture, and in dislocation inwards where the inner malleolus has been broken off, that the outer margin of the foot should be well raised. In his remarks on treatment of fractures of the leg, Dr. Gordon states that he has no faith in the prevention

of overriding by forcible extension. Where he has tried it he has failed, but whenever his attention was directed so as to produce the most perfect muscular relaxation, he does not remember an instance in which he has failed. All displacements—forwards, conversed, backwards, or outwards—may, it is expected, be easily prevented by four splints, a front, heel, and two Cline's splints, and then placing the limb in a position in which the muscles are relaxed. If the fracture be oblique from before, backwards and upwards, or from above, downwards and backwards, the patient must lie on his back, for if he be placed on his side lateral deviation of the fragments will take place, and muscular spasm will be the result. If the fracture be oblique from without inwards and downwards, then the limb must be placed on the outer side, with flexion of the leg upon the thigh, and the thigh on the pelvis.

3074. *Gunn on the Reduction of Dislocations of the Hip and Shoulder.*—Dr. M. Gunn, of Chicago, in a paper on the Philosophy of Manipulation in the Reduction of Hip and Shoulder Dislocations (reprint from *Chicago Medical Journal and Examiner*, May 1884) endeavours to establish the follow propositions. 1. For the easy reduction of a dislocated hip or shoulder, the limb should be placed in, as nearly as possible, the same position as that which most frequently characterises it at the instant of escape. 2. The reduction of hip and shoulder dislocations can generally be easily effected by putting the limb in such a position as will effectually approximate the two points of attachment of that portion of ligament which remains untorn. The portion of ligament that remains untorn may, according to the author, be readily ascertained, as it is obvious that in primary dislocations, the portion of the ligament on the side toward which the head has been transplanted, must be so extensively torn as to permit the escape of the head and its progress to its dislocated position, whilst it is also equally obvious that the opposite portion is not necessarily torn; and if it be considered that the position of the limb at the moment of escape is such as to relax this portion of the ligament, its integrity may be safely assumed. Alluding to the views of Professor Bigelow on the part played in dislocation of the hip by the ilio-femoral ligaments, Dr. Gunn allows that this portion of the capsule is manifestly much the strongest, and is probably rarely torn asunder in any of the four classical dislocations except the thyroid, in which it is, probably always, completely ruptured. Dr. Gunn describes a dissection of the parts from a case of dorsal dislocation of the hip, with the object of showing that the ilio-femoral ligament, in this lesion, is entirely without influence, either in determining the deformity or in opposing our efforts at reduction.

3075. *Lesser on a Case of Stretching of the Intercostal Nerves.*—Dr. L. von Lesser, of Leipzig, has recently reported (*Deutsche Med. Wochensch.*, No. 20, 1884) a somewhat remarkable case of intercostal neuralgia and of mastodynia treated successfully by stretching of several intercostal nerves. The patient, a woman aged 61 years, and the mother of eight children, had suffered during seven years from a feeling of compression of the thorax, very severe paroxysms of darting pains along the intercostal spaces on both sides, but more intense on the right, and neuralgic attacks in the mammæ and nipples. Through the intensity of these paroxysms, which came on usually at night, she was prevented from sleeping, and her sufferings were so severe that she became very anxious that some operation should be performed which might give relief. Just below the ribs on the right side was a fatty tumour of the size of a plum; but this was soft and free from tenderness, and clearly not the cause of the neuralgia. On pressure over each of the much atrophied mammary glands a few drops of fluid, resembling milk, could be forced out through the nipple. This fluid, which was secreted more abundantly during the paroxysms of neuralgia, presented under the microscope an abundance of oil-globules of different sizes, and a few round cells containing oil-globules. As the neuralgic pains were much more severe on the right than on the left side, the operation was performed on the right intercostal nerves from the fourth to the tenth. The incision was begun in the axillary line, and carried obliquely backwards and downwards from the upper margin of the third rib to the lower margin of the tenth rib. The processes of the serratus magnus muscle having been divided, and the external intercostal muscles separated from the lower margins of the corresponding upper ribs, the seven intercostal nerves were exposed, and each forcibly stretched in a centripetal and a centrifugal direction. The patient made a very speedy recovery. From the date of the operation she was able to sleep soundly at night, and complained only of occasional slight 'dragging pains' on the right side of the chest and a feeling of compression over the lower intercostal spaces. Up to the time of her discharge, on the eleventh day after the date of operation, there had not been any return either of the paroxysms of pain or of the mastodynia.

3076. *Madelung on a Modification of Colotomy.*—At the Thirteenth Congress of the German Surgical Association, Dr. Madelung, of Rostock, reported that last winter he had had an opportunity of practising a modification of colotomy, by which the utility of this operation in cases of cancer of the rectum is considerably increased. This surgeon, instead of making a small opening in the colon, cuts through the whole thickness of the gut, and then secures the central end to the abdominal wound, in order to form the false anus, whilst the peripheral end is closed and allowed to sink down into the abdominal cavity. This operation is more difficult than ordinary colotomy. Great care must, of course, be taken to distinguish the centripetal from the centrifugal portion of gut. The great advantage of the modification as proved, Madelung states, in his case, is that the cancerous rectum is protected, not only against the mechanical irritation of the fæcal matter forcing its way through the stricture, but also against the chemical and septic irritation of such matter at the seat of operation. The surrounding skin can be kept clean, since it is to regurgitation of fæcal matter that has passed by the opening in the colon that the continuous defæcation from the preternatural anus, observed in many cases, is especially due. The modification also prevents the very frequent painful accumulation of fæcal matter between the cancerous stricture and the external sphincter ani. Finally, the tendency to prolapse of the intestine is diminished. This modified colotomy is not applicable in cases in which the operation is performed at a late stage of the disease, when the intestines are over-distended, and the patient is much exhausted. Under more favourable conditions, it may be practised with good prospects, as well in the treatment of syphilitic

and gonorrhœal, as of cancerous stricture of the rectum.

3077. *Hache on the Pathology of Cystitis.*—According to M. Hache (*Revue de Chir.*, No. 4, 1884) lesions of the bladder and irritation applied directly to its wall and mucous membrane do not constitute a necessary and sufficient cause of cystitis, except in case of vesical tuberculosis, or of the presence of a rough and irregularly shaped foreign body. The causes capable by themselves of constantly determining inflammation of the bladder are very rare. Beyond tubercular cystitis, and other forms of cystitis due to some general morbid condition—as, for instance, those of rheumatic, gouty, and infective nature, which are not of frequent occurrence—there cannot be included in the above category scarcely any save severe accidental or surgical traumatisms of the bladder, and too sudden and complete evacuation of this organ after over-distension. Gonorrhœal urethritis does not often give rise to cystitis, except under the influence of some occasional cause or in a predisposed subject. Most of the predisposing causes act quite simply by determining a more or less persistent congestion of the bladder; others have a more or less obscure mode of action, although their influence is very decided. Chief amongst these predisposing causes are the tubercular, rheumatic, and gouty diatheses. These predisposing causes may sometimes become exciting causes by increase, extension, or repetition of their action, or through association with that of other causes of the same group. These latter causes are congestion and slight inflammation of neighbouring organs, especially in the female; tumours, calculi, and foreign bodies in the bladder; incomplete retention of urine, with or without distension; habitual resistance to the needs of micturating, and all the causes of dysuria and functional over-activity of the bladder; stricture and foreign bodies in the urethra, hypertrophy of the prostate, &c. Finally, the part of exciting cause is more especially played by sudden and complete retention, by cold, by catheterism or exploration of the bladder. The latter cause can act only on a bladder predisposed by the presence of a tumour or calculus; the other two causes are more active, and may even by themselves suffice to excite an attack of cystitis. M. Hache's study of the pathogeny of cystitis has led him to insist on the importance of congestion and diathesic influences, especially the tubercular diathesis, and on the relatively limited part played by lesions of the urethra and prostate.

3078. *Grundler on the Temperature of the Body in Cases of Simple Fracture.*—In the first part of the *Mittheilungen aus der Chirurgischen Klinik zu Tübingen*, Dr. R. Grundler alludes to the disputed statement by Billroth that febrile action very rarely occurs in association with subcutaneous fracture, and gives a table of twenty-six cases in which he endeavours to determine this question. In the selection of the cases for observation care was taken to exclude those in which there were any complicating injuries, especially wounds, however slight, and those also in which there were indications of any internal complication—as pneumonia, gastric catarrh, &c. The table shows that, except in the case of the small cellular bones, subcutaneous fracture is regularly attended with a febrile rise of temperature. In one only of the twenty-six cases—one of fracture of the radius—was there any freedom from fever. The intensity of the fever, the author found, bears relation not only to the size of the injured segment of the limb, but also to the amount of extravasation of blood. The highest temperature in fracture of the thigh was 102°·6 F.; in fracture of the leg, 102°·2; in fracture of the humerus, 101°·8; and in fracture of the bones of the forearm, 101°·2. It was constantly made out that the rise of the temperature commenced on the evening of the first day, and reached its maximum on the evening of the third or fourth day. The fever, especially in cases of fracture of the larger tubular bones, according to Grundler, lasts for a long time, especially if high at its beginning. This febrile condition, it is stated, presents all the characteristics of Volkmann's aseptic fever, in which there is a marked contrast between the height of the temperature and the absence of any general disturbance. With the exception of the rise of temperature there are no symptoms of fever. This condition is most probably caused through absorption of the extravasated blood and its action as a ferment.

3079. *Stimson on Arterio-Venous Aneurism of the Common Carotid Artery and Internal Jugular Vein.*—Dr. Lewis A. Stimson, of New York, has reported the following case of arterio-venous aneurism (the *American Journal of the Medical Sciences*, April 1884). A man, aged 25, in February 1882, was stabbed with a penknife in the neck, on the left side, half an inch behind the anterior margin of the sterno-mastoid muscle, and on a level with the crico-thyroid space. There was profuse bleeding for about two hours, but the wound healed in a week. Early in the following June a lump of the size of a hen's egg formed at the seat of injury, which was associated with a whirring sensation in the neck. This tumour soon disappeared, but the patient from this time has remained unable to work. On admission to Bellevue Hospital, eighteen months after the infliction of the wound, a very distinct thrill could be felt in the left antero-lateral region of the neck, between the clavicle and the ear, and there was a loud buzzing sound, which was strongly reinforced during the cardiac systole. The thrill could be arrested by firm pressure over the line of the carotid artery. Pulsation was barely perceptible in the left facial artery, was easily recognised in the left temporal artery, and was of the usual force in the corresponding arteries on the right side. After having kept the man under observation for more than a month, Dr. Stimson decided to operate, and to tie the common carotid at one point only, and that as near to the opening on the proximal side as possible, hoping either that the distal clot would extend far enough to close the opening, or that the reverse current through the internal and external carotid would prove too slight to cause inconvenience. The operation was performed on Oct. 8, 1883. The artery was tied below the omo-hyoid muscle with a stout catgut ligature that had been soaked in oil of juniper and preserved in alcohol. The wound healed rapidly, and on the seventeenth day there remained only a small dry scab. The thrill ceased entirely when the ligature was tied, but on the fourth day returned. On the evening of the tenth day there was an alarming attack of dyspnœa, with præcordial distress, and, on the fifteenth day, the patient complained of dizziness and of slight loss of power in the right hand. At the time of the last observation, seven weeks after the date of operation, the thrill was recognisable only over the seat of the opening, and could be arrested by moderately firm pressure at that point, or by deep pressure

behind the angle of the jaw. This contribution ends with an interesting analysis of nine similar cases that have been recorded, together with three of traumatic communication between the internal carotid and internal jugular, and six between the external carotid and a vein in the neck.

W. Johnson Smith.

MEDICINE.

RECENT PAPERS.

3080. Fazio.—Icteric Typhoid at Torre Annunziata. (*Giornale della Società Italiana d'Igiene*, December, 1883.)

3081. Valdés Perez.—Hæmorrhagic Purpura from Emotional Cause. (*El Siglo Medico*, Jan. 22, 1884 ; and *Riv. Especial de Oft. Dermatol.*, &c.)

3082. Riess.—Kussmaul's Coma without Diabetes. (*Zeitschr. für Klin Med.*, Vol. vii.)

3083. Fothergill.—Some Nervous derangements of the Heart. (*Lancet*, June, pp. 1068 to 1112.)

3084. Taylor.—Hæmoptysis and its Treatment. (*Lancet*, June, p. 1069.)

3085. Railton.—A Case of Gonorrhœa with Acute Rheumatism and Endocarditis. (*Brit. Med. Jour.*, June, p. 1142.)

3086. Robinson.—An Epidemic of Sore Throat from Cow's Milk. (*Practitioner*, June, 1884.)

3087. Yeo.—On Pneumonia. (*Med. Times and Gazette*, May, p. 721.)

3088. Granville.—On Fever. (*Brit. Med. Jour.*, June 1884, p. 1084.)

Art. 3080. *Fazio on Icteric Typhoid.*—Towards the end of June, 1883, in the city of Torre Annunziata, several cases of acute jaundice occurred. The cases became more frequent, and the local medical men differed as to the nature of the disease. The provincial Council of Health was, therefore, petitioned to name a commission to investigate the disease, which was described as *icterus gravis*, or as acute yellow atrophy of the liver, as icteric typhoid, or even as yellow fever. *Post mortem* examination of several bodies showed hæmorrhagic spots, acute tumour of the spleen, slight enlargement of the liver. Bile flowed easily into the duodenum ; Peyer's patches were rather tumid ; the cortical substance of the kidneys was somewhat congested and coloured by a greenish pigment, pulmonary hypostasis, &c. Evidently the disease was an infective fever of not well determined type, having as its prevailing symptom hæmatogenic jaundice, and probably typhoid in nature. The disease did not acquire a contagious or epidemic character. There were only twelve cases in the course of four months in a town of 25,000 inhabitants. Of the twelve cases, seven were fatal. According to Hirsch, this bilious typhoid has been often observed on the southern and eastern coasts of Europe, and in the islands of the Mediterranean. Dalmatia, Greece, Constantinople, and Asia Minor have at various times been visited by it. A few years ago a similar outbreak occurred in Ancona. As to the etiology, no specific cause could be found ; but the unwholesome state of the town is enough to account for anything. The drinking water is brought to the city in an open aqueduct, into which is thrown every sort of abomination ; the subsoil is saturated with filth; the houses are dirty; there are no means of isolating the sick ; and no disinfection of places or dead bodies is practised.

3081. *Valdés Perez on Hæmorrhagic Purpura from Emotional Cause.*—A well-nourished boy, aged 16, of good family and personal history, received a severe fright, and on the next day had to leave work from an attack of epistaxis, followed by general malaria, with pains in the limbs and joints. The next morning he was covered with red spots, but felt somewhat better, and again went to work. Epistaxis again occurred, and was followed later by copious hæmorrhages from the anus, urethra, conjunctiva, ears, and nose. On the fifth day of the attack he was admitted to the General Hospital in a state of profound exhaustion. He was covered with red patches of purpura, varying in size from a lentil to sixpence or a shilling. Hæmorrhage from the mucous surfaces still continued, and the urine and stools were full of blood. Under a simple diet—sulphuric lemonade, ergot, and perchloride of iron—he made a good and rapid recovery.

G. D'Arcy Adams, M.D.

3082. *Riess on Kussmaul's Coma without Diabetes.* Riess (*Zeitschr. für Klin. Med.*, Vol. vii., Suppll. Heft, p. 34) has met with coma resembling that of diabetes, presenting the peculiar dyspnœa, in eight cases of pure anæmia, five cases of anæmia with renal disease, and four cases of gastric and hepatic cancer. In no instance was sugar present in the urine. Robert Saundby, M.D.

3083. *Fothergill on some Nervous Derangements of the Heart.*—In the *Lancet*, June 1884, p. 1068, Dr. Milner Fothergill divides diseases of the heart proper into—1. valvular ; 2. muscular ; and 3. nervous. It is with the nervous affections of the heart that the paper chiefly deals, and the first of these is pure intermittence—a halt in the usual rhythmic stroke of the ventricles. It is very commonly met with in old or elderly men, and, if associated with organic disease, may occasion groundless alarm. It is a mere disturbance of rhythm, and, as far as our present knowledge goes, has no significance, unless found with other signs of degenerative change ; then it has a significance, which, however, is borrowed from them, rather than furnished by itself. When intermittence is increased by effort, then it is well to examine the condition of the circulatory organs. When it is found with irregularity of rhythm, and this becomes more pronounced on exertion, the author states that then it is nearly certain that there is something more than a mere 'neurosal halt.' Another common neurosal disturbance of the heart is palpitation. Nocturnal palpitation is common in women at the menopause, where there is a suspicion of gout. In some cases it is brought on by coitus, in others it may be relieved by the sexual act. Palpitation may be set up by some abnormal condition existing elsewhere. A displaced uterus may be the provoking cause ; and until the organ is once more in its normal position, little relief is obtained from treatment. At p. 1112 he describes a form of neurosal derangement of the heart which he terms 'the badly behaved heart.' It is mostly met with in women ; the heart's action is persistently and continuously tumultuous, and there is a great deal of actual palpitation at times, with intervals when the heart's action is quieter, but never calm. The author concludes by drawing some broad distinctions between organic disease and neurosal affection of the heart. Organic change reveals itself in two ways ; (1) by signs discoverable upon physical examination, and (2) by physiological indications of the effects of effort—as short-

ness of breath upon exertion, for instance. In neurosal affections there are no such evidences; the heart on examination is found normal except there is some perverted action. In the 'irritable' heart, however, there is a certain amount of inability to bear any strain. The author lays stress on the statement, that a neurosal affection of the heart never develops into organic disease as a process of development.

3084. *Taylor on Hæmoptysis and its Treatment.*—Dr. Taylor, in the *Lancet*, June 1884, p. 1069, discusses those cases of hæmoptysis in which there is a suspicion of pulmonary tubercle being present. Pulmonary hæmorrhages are grouped under four heads: 1, the hæmorrhage of the early stage of phthisis; 2, the hæmorrhage occurring when the disease is fairly advanced and is progressing; 3, the profuse hæmorrhage of the last stage; 4, that occurring in cases of bronchitis, in 'bleeders,' in vicarious menstruation, and in mitral valvular disease. As regards treatment, the author states that in many cases he considers there is an undue precipitancy in employing the astringents usually advocated, and that in the early stage of pulmonary consumption a small amount of hæmorrhage has been rather beneficial than otherwise. A blood-spitting at this period is merely a method to alleviate a congested apex. Consequently it is a congestion that has to be combated, not the subsequent hæmorrhage. The best treatment in these cases is to attend to the patient's general health, ordering moderate exercise without fatigue. As regards climate, the author considers a residence in the high lands around Buxton and the Derbyshire Peak to be highly beneficial; whilst Bournemouth, Hastings, &c., are too relaxing. In cases where the pulmonary hæmorrhage is severe, it is better to give a good purgative than to rely on large doses of gallic acid, &c. An ice-bag placed on the chest is considered valueless, but the opposite line of treatment is highly recommended—viz., the application of hot flannels over the angles of the ribs from the summit to the base of the thorax, *i.e.* over the sympathetic ganglia. Turning to medicinal remedies, the chief drug which the author relies upon is opium, this acting like a charm if given alone, and in sufficient quantities. Should the hæmorrhage be very profuse, digitalis may be added in doses of fifteen to twenty minims of the tincture. When opium is contra-indicated, then oil of turpentine or the liquid extract of ergot are said to be useful.

3085. *Railton on a Case of Gonorrhœa with Acute Rheumatism and Endocarditis.*—Dr. Railton, in the *Brit. Med. Jour.*, June 1884, p. 1142, records the case of a man, aged 21, who in August contracted gonorrhœa for the first time in his life. On August 25 he discontinued injection, thinking he was cured; but still noticed the end of the urethra to be occasionally glued up with a drop of pus. On September 15 he began to feel ill, with repeated shiverings, sore throat, and aching in his limbs; the throat continued to get worse, and on the 20th the wrists were swollen; by the 22nd several joints were affected, and a faint systolic murmur was heard at the heart's apex. On September 25 the fever, pain, and sweating began to abate; but the systolic apex murmur was still present, and the pulmonary second sound was found strongly accentuated. On October 3 a second murmur became audible, systolic in rhythm, with its maximum intensity at the aortic cartilage. On October 22, after having used an injection assiduously, the gonorrhœa had almost ceased and the heart murmur had disappeared. The case is brought forward to support the view that gonorrhœa and rheumatism are intimately connected.

3086. *Robinson on an Epidemic of Sore-Throat from Cow's Milk.*—Dr. M. K. Robinson, in the *Practitioner*, June 1884, p. 467, contributes an able article on an outbreak of epidemic sore-throat following use of milk from cows suffering from aphthous fever, which occurred in Dover during February 1884. Within four days 188 persons were attacked by this malady, all of whom obtained their milk from one particular dairy. Some of the dairyman's customers, however, escaped. Those who partook of the special milk escaped, whilst those who partook of the cream and the mixed milk were attacked. The supply of milk was obtained from twelve cows kept on the dairyman's own premises at Dover, and also from three farm establishments in the country. It was discovered that at one of these establishments in the country aphthous fever had broken out amongst the stock on January 14, and that milk from some of the affected cows was delivered to the Dover dairyman. This was mixed with the other milk. Moreover, it was from this affected farm alone that the cream was obtained.

3087. *Yeo on Pneumonia.*—In the *Med. Times and Gazette*, May 1884, p. 721, an abstract is given of a lecture by Dr. Burney Yeo on the Pathological Nature, Etiology, and Treatment of Pneumonia. In 1875 Klebs asserted that pneumonia was a parasitic disease, but Friedländer had the credit of first accurately distinguishing the organism and describing its specific form and characteristics. Dr. Yeo then goes on to show by a series of examples on what grounds the theory is based that pneumonia is an infective disease, dependent on the presence of a specific pathogenic organism in the body; and that, under certain somewhat rare circumstances of time, place, or season, it may spread by direct and indirect contagion. The most widely accepted view of the nature of pneumonia is that it is a typical local inflammation, produced by exposure to cold, and that the accompanying pyrexia is merely symptomatic of the local lesion. Another view which is maintained by many good authorities is, that acute pneumonia is a general disease, and that the lung inflammation is simply the chief local lesion. As regards the treatment of pneumonia, Dr. Yeo stated he was content to be what was called 'an opportunist.' He believed in no special treatment, but in a rational common-sense management of individual cases. The author concluded by stating that he considered the abortive treatment of acute croupous pneumonia by aconite to be highly dangerous, and that such a drug as aconite ought not to be 'pushed' in pneumonia.

3088. *Granville on Fever.*—Dr. Mortimer Granville, in the *Brit. Med. Jour.*, June 1884, p. 1084, writes that in typhoid fever there is what he terms the nerval or primary nerve stage, or phase, of the disease, and that the practitioner is often thrown on his beam ends as to how he can carry his patient through this stage. The suggestion offered by the author to ward off the danger from this nervous shock during the first few days of the fever, is that recourse should be had to the *bain électrique*, or electric bath, the bed being insulated by placing the castors on plate-glass. The prime conductor of an electric machine is then to be brought into contact with the patient,

preferably over the solar plexus, and the body charged with static electricity. The effect will be to neutralise the depressing effects of the poison, and to enable the patient to tide over the premature crisis, which, if life can be prolonged, will be found to pass in a very brief period. RICHARD NEALE, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

3089. MARAGLIANO, PROFFSSOR E.—Antipyrin, a New Antipyretic. (*Italia Medica*, June 5, 1884.)

3090. CURCI, A.—The Action of Certain Drugs on the Circulation of the Blood in the Brain. (*Gazz. Med. Ital. Lombardia*, July 12, 1884.)

3091. CELLI, DR. ANGELO.—On Albuminous Diet. (*Gazz. Med. Ital. Prov. Venete*, June 28, 1884.)

3092. RIGHI.—Resorcin. (*El Siglo Medico*, March 9, 1884.)

3093. BOKAI. — The Occurrence of Herpes Zoster during the Treatment of Chorea by Arsenic. (*Jahrbuch für Kinderheilk.*, Band xxi., Heft 4.)

3094. DUPONT.—On Extractum Stigmatum Maidis in Diseases of the Heart. (*Centralbl. für die Gesammte Therapie.*)

3095. MACDOUGALL.—Mercury in Pleurisy. (*Practitioner*, June, p. 427.)

3096. WOLFENDEN.—Epilepsy Treated with Hydrobromate of Conia. (*Practitioner*, June, p. 431.)

3097. DOBSON.—The Treatment of Coryza. (*Lancet*, May, p. 978.)

3098. MONCKTON.—Sulpho-carbolate of Soda in Diabetes Mellitus. (*Australasian Med. Gazette*, March.)

3099. CUTTER.—Protracted Lethargy after Large Doses of Bromide of Sodium. (*Boston Med. and Surg. Jour.*, March 13.)

3100. GREENWAY. — The Treatment of Tubercular Meningitis by Phosphorus. (*Brit. Med. Jour.*, June, p. 1145.)

3101. THOROWGOOD. — Phosphorus in Tuberculous Disease. (*Brit. Med. Jour.*, June, p. 1206.)

3102. ILLINGWORTH. — The Treatment of Croup. (*Brit. Med. Jour*, June, p. 1190.)

3103. ROBSON.—The Treatment of Phthisis by means of the Eucalyptus Atmosphere. (*Brit. Med. Jour.*, June, p. 1204.)

3104. STRAHAN.—Arsenic in Gastric Ulcer. (*Brit. Med. Jour.*, June, p. 1203.)

3105. MARSHALL.—The Use of Salicylic Acid in the Treatment of Lupus Vulgaris. (*Brit. Med. Jour.*, June, p. 1253.)

3106. YEO, BURNEY.—The Treatment of Acute Nasal Catarrh. (*Med. Times and Gazette*, June, p. 751.)

3107. PHILLIPS. — The Treatment of Hay-Fever. (*Brit. Med. Jour.*, June, p. 1090.)

3108. SPENDER.—The Treatment of Migraine. (*Brit. Med. Jour.*, June, p. 1144.)

ART. 3089. *Maragliano on Antipyrin, a New Antipyretic.*—A new synthetic alkaloid, belonging to the group of chinoline derivatives, has been formed by L. Know, of Erlangen. Professor E. Maragliano reports, in the *Italia Medica* of June 5, the experiments made under his direction with this alkaloid. He finds that the most sensitive reagent is 'iodurated potassium iodide,' which will show one part in 100,000. In examining the urine for it, it is necessary to acidulate it with sulphuric acid. Taking 5 c. c. of urine, he adds 5 drops of sulphuric acid, or more if the urine be alkaline, until the carbonates are saturated. If the urine be turbid it is filtered, and then 10 drops of the iodic reagent added. If antipyrin be present, a reddish-brown precipitate is obtained. A slight reaction is obtained three hours after the administration of the drug; after four hours the reaction is marked, after twenty-four hours the same, and after thirty-six hours is still perceptible. Antipyrin was given to apyretic and febrile patients, in doses of one to three grammes at intervals of one to three hours. It gives rise to no general symptoms, and rarely causes vomiting; the frequency of respiration is not modified. The pulse is always diminished in frequency, sometimes conspicuously so. Arterial pressure is unchanged, or slightly augmented. The normal temperature is not affected. In apyretic individuals, it causes a slight dilatation of the cutaneous vessels, often scarcely noticeable. In pyretic individuals, the dilatation is more energetic and accentuated. This dilatation somewhat precedes the fall in temperature, which is accompanied by sweating. In doses of 50 centigrammes given in one dose, it generally causes a fall of three to four-tenths of a degree (Centigrade) after about two hours, but this fall does not last. In doses of 1 gramme, the fall commences after one hour and increases during five or six hours, and reaches even 3° C. A more rapid fall follows a dose of 1½ gramme, which may amount to 2° or 3° after seven hours. A dose of 2 grammes causes a fall of 0°·8 to 1°·3 in one hour, and lasts longer than the fall caused by the 1½ gramme. Antipyrin in repeated doses exerts its antipyretic action for six to fifteen hours, and it appears that this may be extended to forty hours or more. Phthisical patients who took antipyrin in this manner not only lost the fever for that day, but for the one or two days following, the fever becoming tertian or quartan instead of quotidian. Antipyrin from these experiments seems really to possess energetic antipyretic properties. Its immediate antipyretic action in equal doses is less than that of kairin, but it has the great advantage of extending its action over considerably longer time.

3090. *Curci on the Action of Certain Drugs on the Circulation of the Blood in the Brain.*—Dr. Antonio Curci (*Gazz. Med. Ital. Lombardia*, July 12, 1884), starting from the well-known fact that hyperæmia enlarges the brain while anæmia diminishes its volume, performed fourteen experiments on dogs. The cranium being previously trephined, a manometer with coloured water was applied in relation with the surface of the brain by means of a tube full of oil, oil being chosen from its not being capable of absorption. To these dogs were given chloroform and ether (four experiments), chloral-hydrate (two), paraldehyde (one), amyl nitrite (two), morphia (three), and quinine (two.) The action of atropine was also tried, but the effects were contradictory. Albertoni found that small doses of atropine had no effect, while large doses caused cerebral anæmia. To obtain exact and genuine results, it is very necessary to await the spontaneous tranquillity of the animal before beginning the experiment. Chloroform, ether, chloral-hydrate, and paraldehyde induce relative cerebral anæmia, as does also quinine, and hence the explanation of its advantage in insolation. Amyl nitrite and morphia cause hyperæmia. In profound and continued sleep during the action of morphia the manometric column is lowered; that is, the state of hyperæmia disappears. It is worthy

of note that, while morphia is not able to cause hyperæmia of the brain exposed to the action of chloral, paraldehyde, chloroform, ether, or quinine, the hyperæmia due to morphia yields to the influence of these substances. The indications and contra-indications of these remedies are thus obvious. One or the other is to be used according to the supposed state of the cerebral circulation. In hyperæmia of the brain, chloral, paraldehyde, chloroform, ether, or quinine may be given, while in states of cerebral anæmia, morphia, and amyl nitrite are indicated.

3091. *Celli on Albuminous Diet.*—Dr. Angelo Celli, in a paper read to the Società Lancisiana degli Ospitali of Rome (*Gazz. Med. Ital. Prov. Venete*, June 28, 1884), draws attention to the great advantages to be obtained in some obstinate cases of diarrhœa from egg-albumen. He instances two cases. The first, a man aged 43, suffered from chronic enteritis and diarrhœa. He had never had syphilis nor tuberculosis, nor was there any other cause to which the intractable intestinal catarrh could be attributed. In spite of all treatment and the most careful dieting, the symptoms continued, and the patient's state was most alarming. All drugs being abandoned, under a diet of white of eggs the diarrhœa rapidly ceased, and in fifteen days had completely disappeared, and the patient quickly regained health and strength. The second case was that of a midwife suffering from uncontrollable diarrhœa. Medicines and milk-diet had no beneficial effect. The day after commencing the albuminous diet, the stools were reduced from thirty and forty to three in the twenty-four hours, and after eight days the diarrhœa completely ceased. In fifteen other cases of chronic catarrhal enteritis, in which other treatment was useless, the diet of albumen was completely successful. In the diarrhœa accompanying the palustral cachexia it is also often advantageous, and in the diarrhœa of the tuberculous. In two cases of chronic diarrhœa accompanying tertiary syphilis it was of no avail, diffused amyloid degeneration of the arterioles of the villi being found after death. The albumen is given in the following manner: the whites of eight or nine eggs are beaten up and emulsionised in a half litre of water, which is to be taken by sips during the day. The quantity may be increased if necessary, and eighteen eggs have been given in the day in a litre and a half of water. This makes an insipid but not disagreeable drink. It may be made more palatable by the addition of a few drops of some essence, lemon, aniseed, and sugar. If the diarrhœa be accompanied by much pain, laudanum may be added in suitable doses.

3092. *Righi on Resorcin.*—Righi (*El Siglo Medico*, March 9) says that resorcin is well borne. It sometimes produces transient vertigo, noises in the ears, and congestion of the face; rarely weight or pain in the stomach; nearly always abundant sweating for an hour. Externally it is not caustic, and has no disagreeable odour. In miasmatic affections, it causes a certain fall of temperature and opposes the malarial infection. It diminishes recent splenic tumefaction. In typhoid, pneumonia, and erysipelas, it has a prompt antipyretic effect. In acute gastro-intestinal catarrh it is of great use; it should be given with bicarbonate of soda. In chronic blennorrhagic urethritis, it is to be preferred to all other remedies. Its effect is marked in acute or chronic catarrh of the conjunctiva, and in lesions of the cornea.

G. D'Arcy Adams, M.D.

3093. *Bokai on the Occurrence of Herpes Zoster in Chorea treated with Arsenic.*—Dr. Bokai relates (*Jahrbuch für Kinderheilkunde*, Band xxi., Heft 4) the cases of three girls admitted for chorea minor. They were all treated with liquor arsenicalis in small doses, and with good result, except that, after the administration of respectively 157, 250, and 320 drops of Fowler's solution, well-marked one-sided herpes zoster showed itself in each. The arsenic was immediately withdrawn, and the herpes alone treated. The chorea had already greatly diminished, and in one case had so far disappeared that the arsenic was taken off some three weeks before the herpes showed itself. The author agrees with Hutchinson in attributing the eruption to the use of arsenic.

3094. *Dupont on Extractum Stigmatum Maidis in Diseases of the Heart.*—During the past three years, Dupont (*Centralbl. für die Gesammte Therapie*) has employed this extract in heart-diseases with very good results. The extractum stigmata maidis reduces the action of the heart and increases diuresis. It is, as a rule, well tolerated. As a rule, its diuretic action is manifest on the first day after it is administered, and not unfrequently this action increases until after the third day. The amount of water excreted often increases from 500 grammes to 1,500 and 2,000 grammes (Oi-iv). It is especially indicated in diseases of the heart with œdema of the lower extremities, or general hydrops, in which class of cases it displays its power as a diuretic. As the œdema disappears, the blood-supply throughout the system is better regulated; the pulse-beat is more regular, the heart's action is slower and more rhythmical. While the general condition of the patient improves rapidly, dyspnœa does not seem to be influenced by the medicament. In cases of hypertrophy, contractions, and insufficiency, the same results were always noted. The reason why this drug deserves praise is because it is well tolerated by all the patients. When compared with digitalis it acts more rapidly, while there is not so much difference between its action and that of convallaria majalis. In the beginning Dupont always administered the drug alone, until he had carefully studied its action, after which he combined with it bromide of potassium, iodide of potassium, and milk. With regard to the dose, the largest amount given was 3 grammes (45 grains), three times a day, one hour before each meal, with a little syrup. Generally half this quantity was sufficient to bring about a diuretic action.

Ralph W. Leftwich, M.D.

3095. *Macdougall on Mercury in Pleurisy.*—Dr. Macdougall, in the *Practitioner*, June 1884, p. 427, contributes an article on 'The Value of Mercury in the Treatment of Pleurisy.' A case is recorded of a patient, aged 40, who was suffering from extreme prostration and excessive effusion into the right pleural cavity. Paracentesis was performed, but nothing seemed to improve the patient's condition, until Dr. Macdougall ordered mercurial ointment to be rubbed freely into the inner aspect of the thighs and arms. Within forty-eight hours marked improvement declared itself, the temperature fell, absorption commenced, and in a few weeks the patient made a complete recovery. In the *Practitioner*, May 1878, Dr. Thorowgood regards mercury as of great value in pleurisy, but teaches that it may be laid aside when the pulse has fallen and the temperature is normal; whereas Dr. Macdougall states

that it may be discontinued for a time, but that it is better to continue its administration in small doses until the effusion has disappeared.

3096. *Wolfenden on Epilepsy treated with Hydrobromate of Conia.*—Mr. Wolfenden, in the *Practitioner*, June 1884, p. 431, records the results of seven cases of epilepsy treated with hydrobromate of conia, from which he draws conclusions that the drug is undoubtedly serviceable in certain cases, and that, in those cases where failure is met with, the convulsions are due possibly to some gross lesion of the brain. The drawbacks to the use of the drug appear in the complaints of headache, and of giddiness after large doses, with sometimes a suffusion and congestion of the conjunctiva. A child 8 years old bore one and seven-eighths grain with only headache, and an adult man took three and a quarter grains with impunity.

3097. *Dobson on the Treatment of Coryza.*—Dr Dobson, in the *Lancet*, May 1884, p. 978, introduces to the notice of the profession the following simple yet thoroughly effective mode of treating coryza. Place a drachm of coarsely powdered camphor in an ordinary shaving-jug, and half fill it with boiling water. The patient is then to make a cone out of a sheet of newspaper, large enough to surround the face at its wide end, and the mouth of the jug at its narrow end. He next proceeds to respire freely, at each inhalation drawing the steam into his nostrils, and forcing it against his face at each exhalation. This should be continued for ten to twenty minutes, and frequently repeated.

3098. *Monckton on Sulpho-carbolate of Soda in Diabetes Mellitus.*—In the *Australasian Med. Gazette*, March 1884, Mr. Monckton records cases in which marked benefit has been derived in cases of diabetes mellitus by the administration of sulpho-carbolate of soda in doses of from five to thirty grains. The only restriction as to diet which is made is to forbid oatmeal porridge. [The value of carbolic acid in diabetes has been noticed by many observers. Vide *Medical Digest*, sect. 329 : 6.]

3099. *Cutter on Protracted Lethargy after Large Doses of Bromide of Sodium.*—In the *Boston Med. and Surg. Jour.* for March 13, 1884, Dr. Cutter reports the case of a patient who tried to cure himself of the morphia habit by means of an advertised 'cure.' He took sixty grains of sodic bromide three times a day for the first day ; three doses of seventy grains on the second day ; and so on. This programme was carefully followed out for a whole week, on the last day of which the patient could scarcely be made to swallow the prescribed dose. Four days later his lethargy was complete ; no reflex action of any kind could be excited ; nothing could be swallowed. He was treated with enemata of milk, beef-tea, small doses of alcohol, strychnia, nitre, and general faradisation. On the fifteenth day the conjunctiva was found to be sensitive to touch ; on the twentieth day he began to waken, and urine was for the first time voided without the aid of the catheter. The patient was only temporarily broken of his morphia-craving, but ultimately resumed the habit.

3100. *Greenway on the Treatment of Tubercular Meningitis by Phosphorus.*—Mr. H. Greenway, in the *Brit. Med. Jour.*, June 1884, p. 1145, writes that he has found great benefit from the use of phosphorus in the treatment of tubercular meningitis. The preparation used was Fauconnet's syrup of phosphorus, and the dose prescribed was one to two minims for each year of age, repeated every four hours whilst necessary. In the case of an adult the dose should not exceed thirty minims.

3101. *Thorowgood on Phosphorus in Tubercular Disease.*—Dr. Thorowgood, in the *Brit. Med. Jour.*, June 1884, p. 1206, writes that he has employed phosphorus, as well as the hypophosphites of potash and soda, with much success in cases of pleuritic thickenings. The author states that old-standing consolidations of lung that have existed for one, two, or three months, begin to move and disperse as soon as the hypophosphite of potash is given. In cases of lung-disease which are of inflammatory or exudative origin, no remedy is to compare with the hypophosphites. It is the bacillus that seems to set the phosphorus treatment at defiance ; and Dr. Thorowgood notices at Victoria Park Hospital, that, just when he finds the hypophosphites most helpless, then it is that the clinical assistant finds 'lots of bacilli.' [At sect. 700 : 5 in the *Medical Digest*, a most valuable and instructive consensus of authorities may be traced as regards the specific value of phosphorus and the hypophosphites in the treatment of tubercle.—*Rep.*]

3102. *Illingworth on the Treatment of Croup.*—Dr. Illingworth, in the *Brit. Med. Jour.*, June 1884, p. 1190, writes that he has lately in cases of croup had recourse to strong astringent remedies internally, and powerful counter-irritants—in the shape of blisters—externally, with the best results. The blisters are applied under each angle of the lower jaw ; and minim-doses of the perchloride of iron are given, together with grain-doses of the sulphate of alumina, combined with two minim-doses of the tincture of belladonna, every two hours.

3103. *Robson on the Treatment of Phthisis by Means of the Eucalyptus Atmosphere.*—Mr. Mayo Robson, in the *Brit. Med. Jour.*, June 1884, p. 1204, directs attention to his method of treating phthisis by means of the eucalyptus atmosphere. In the *Brit. Med. Jour.*, Sept. 2, 1882, the author describes how he can charge a chamber at frequent intervals with eucalyptus air. When not in the house, the patient is directed to wear an oronasal respirator, through which the volatile oil of eucalyptus is inhaled. Messrs. Mayer and Meltzer manufacture the machines for the production of the antiseptic air, and let them out for a month to any one wishing to give the treatment a trial. [Vide *Medical Digest*, sect. 698 : 5.]

3104. *Strahan on Arsenic in Gastric Ulcer.*—In the *Brit. Med. Jour.*, June 1884, p. 1203, Dr. Strahan records three cases of gastric ulcer, each ending in recovery in an unusually short time, and each occurring in the most dangerous class of subjects—viz., young women. The treatment adopted is as follows. The patient is put upon regular milk-diet (four ounces every four hours), with lime-water ; the bowels are regulated with a simple aloes pill at bed-time ; a small blister is applied to the tender spot at the epigastrium ; and one minim of Fowler's solution is given on an empty stomach four times a day.

3105. *Marshall on the Use of Salicylic Acid in the Treatment of Lupus Vulgaris.*—Mr. J. G. Marshall, in the *Brit. Med. Jour.*, June 1884, p. 1253, writes that he has for some time employed salicylic acid, in the form of ointment, as a remedy for eczema of the scalp, and impetigo contagiosa, with the most satisfactory results. The author also employed it in a very bad case of lupus exedens. The patient, a woman aged 25, was much disfigured with the

disease, which was increasing rapidly at the time Mr. Marshall tried the ointment. At first 15 grains to the ounce of vaseline were used with little success; but, on increasing the strength to a drachm, and then to a drachm and a half to the ounce, the ulcers began to heal, no tubercles appeared, and the skin of the face soon became almost sound. [In 1879, Dr. Duffin testified to the value of salicylic acid in this disease. Vide *Medical Digest*, sect. 65 : 5.—*Rep.*]

3106. *Yeo on the Treatment of Acute Nasal Catarrh.*—In the *Med. Times and Gazette*, June 1884, p. 757, is published one of a series of lectures by Dr. Burney Yeo on the Treatment of Disease. Acute nasal catarrh is the first subject considered, and the treatment is divided under three heads: 1. Prophylactic treatment: 2. General remedies: 3. Local remedies. 1. In the prophylactic treatment, the most important measure is the adoption of some hardening process, which shall have for its object the removal or diminution of a certain excessive sensitiveness of the skin and mucous membrane. Dr. Yeo recommends avoidance of sedentary habits, and free exercise in the open air, with cold sponging over the head and neck, begun in warm weather and carried on throughout the winter; a residence in a dry and bracing locality, especially a few weeks in the high open air valleys of Switzerland. Next in value to mountain-air is well directed sea-bathing during the summer months, associated with abundant exposure to the open air of the seaside. 2. With regard to general remedies, by far the best is opium or morphia. If the cold be in its initial stage, give the patient a good meal in the middle of the day, and no more solid food after it, but about three or four hours before bedtime give an eighth of a grain of acetate or sulphate of morphia, with a small cup of weak tea; then at bedtime another eighth of a grain with a wineglass-full of whisky and water. The success of this plan depends upon the patient having his stomach comparatively free from food. When the initial stage is passed and the nasal fluxion is thoroughly established, the following draught at bedtime is of great use:—℞ Liquor. opii sedat. ℥xv., vin. ipecac. ℥v., spiritûs æther. nit. ʒj., liquor. ammon. acetat. ʒiij., aq. camph. ad jss. In children and young people, when an attack is accompanied with decided feverishness, aconite is of service. 3. Lastly, the action of local remedies is considered. These are generally only required in the chronic forms of catarrh, and consist of powders, vapours, gargles, &c.

3107. *Phillips on the Treatment of Hay-Fever.*—Mr. W. F. Phillips, in the *Brit. Med. Jour.*, June 1884, p. 1090, draws attention to the treatment of hay-fever by belladonna. The dose suggested is a minim and a quarter of the succus every hour till relief is obtained. The same medicine may be used as a lotion to the eyes when they are especially tender.

3108. *Spender on the Treatment of Migraine.*—In the *Brit. Med. Jour.*, June 1884, p. 1144, Dr. J. K. Spender adds a few remarks to the treatment set down by Dr. Beale, in his book on *Slight Ailments*, of 'sick headache.' Dr. Spender speaks from personal experience, and says that he always felt particularly well on the day before an attack; this warned him, so that at bedtime he took a mild aperient of aloes and myrrh, and kept off sleep as much as possible, considering a long and deep slumber as most injurious. Starvation is a rule absolutely to be obeyed, but tea may be taken hot and strong at frequent intervals. With regard to medicines, Dr. Spender lays special stress on prophylactic treatment. A dose of Indian hemp and quinine, taken every night during the intervals of the attacks, gradually alleviates the disease. In several cases also, hyposulphite of soda has seemed to do good.

Richard Neale, M.D.

PATHOLOGY.

RECENT PAPERS.

3109. Baumgarten.—The Communication of Tuberculosis by Food, and on the Diminution of the Pathogenic Activity of Tubercle-Bacilli by Putrefaction. (*Centralbl. für die Med. Wiss.*, No. 2, 1883.)

3110. Ransohoff.—A Case of Retroperitoneal Cysto-sarcoma. (*Medical News*, Nov. 24, 1883.)

3111. Duffey and Abraham.—The Connection of Acute Diabetes with Disease of the Pancreas. (*Dublin Jour. of Med. Science.*)

3112. Englisch.—Albuminuria in Strangulated Hernia. (*Wien. Med. Presse*, 7, 1884.)

3113. Giraudeau.—Muscular Infarcts. (*Revue de Méd.*, No. 6, 1884.)

3114. Duclaux.—The Micro-organism of the Biskra Bouton. (*Paris Méd.*, No. 24, 1884.)

3115. Thomas.—Displacement of the Transverse Colon. (*Boston Med. and Surg. Jour.*, Jan. 3.)

Art. 3109. *Baumgarten on the Communication of Tuberculosis by Food, and on the Diminution of the Pathogenic Activity of Tubercle-Bacilli by Putrefaction.*—Baumgarten (*Centralbl. für die Med. Wiss.*, 1884, No. 2) has attempted to settle the vexed question whether tubercle-bacilli introduced into the organism with food, as in the milk of tubercular cows (which in animals suffering from tuberculosis of the udder has been proved by Bollinger to contain tubercle-bacilli), can produce tuberculosis. He experimented by mixing tubercle-bacilli with fresh milk and feeding young rabbits with this, and he found that the constant result was tuberculosis of the intestinal mucous membrane, the mesenteric glands, and the liver. The intensity of the tuberculosis was in direct proportion to the quantity of bacilli in the milk. A few tubercular nodules were found in the lungs. From his earlier experiments, he had been led to the conclusion that *post mortem* putrefactive processes destroyed or weakened the virulence of the bacilli. In order to determine whether the putrefactive process (sepsis), *per se*, hindered the development of tuberculosis, he mixed tubercle-bacilli with a virulent inflammatory putrefactive fluid, and found that local and general tuberculosis resulted from the introduction of this into the anterior chamber of the eyes of animals. He therefore thinks that, although the *prolonged* contact with putrefactive processes weakens the activity of the bacilli, the septic process within the organism does not antagonise the development of tuberculosis. This conclusion is opposed to that of Falk; and he points out that the observation of Falk, that animals infected with pus taken from the local tubercular lesions produced by tubercular virus so weakened acquired general tuberculosis, is opposed to his view that the virus was really diminished in intensity, as in that case we should expect that the second series of animals should develop local, or at least modified, tuberculosis.

3110. *Ransohoff on a Case of Retroperitoneal Cysto-sarcoma.*—Ransohoff (*Medical News*, Nov. 24, 1883) reports the case of a baker, aged 33, with enlargement of the abdomen, which had lasted two years, and was at one time associated with œdema of the lower limbs. In the upper part of the abdomen there was a smooth fluctuating mass, which moved with respiration, and an exploratory incision into this tumour was followed by the escape of half a pint of clear fluid and a quantity of brain-like matter. The hæmorrhage was alarming, and the patient died seventy-six hours afterwards. At the necropsy, a tumour twice the size of a man's head was found blended with the liver, and springing from behind the peritoneal cavity. Histologically, it was a mixed-celled sarcoma. Czerny has successfully operated on a similar case (Langenbeck's *Archiv*, Band xxv., p. 869). In the discussion that followed the description of the case at a meeting of a Medical Society, Dr. Whittaker said that the development of tumours in regions like this, where no injury could be received, added strength to the theory of Cohnheim, that such growths spring from islands of embryonic tissue remaining undeveloped, after the maturity of the organs and tissues for the formation of which they were intended. The experiments of Zahn lend support to this view. This observer found that, while mature tissues, cartilage, bone, &c., could not be transplanted, immature tissues, periosteum, deep layers of epithelium, could be made to grow when transplanted. Leopold has since transplanted in this way not only parts, but whole fœtal tissues and organs, as the whole heart. In one instance, where he had inserted bone-tissue into the aqueous humour, growth occurred to such an extent as to destroy the whole eye. It is at least pleasing to have a theory or a rational hypothesis in illumination of a subject so obscure.

3111. *Duffey and Abraham on the Connection of Acute Diabetes with Disease of the Pancreas.*—Dr. Duffey has reported (*Dublin Journal of Medical Science*) a case of acute diabetes in a countryman, aged 24, which terminated fatally by coma after a course of seven weeks, and in which at the *post mortem* examination the pancreas was found to be hypertrophied and indurated, presenting under the microscope, according to Mr. Abraham, the appearance of carcinoma. Dr. Duffey, while admitting that the connection between pancreatic disease and diabetes is yet quite obscure, draws attention to the statements of Lancereaux and Depierre, that it is especially in acute diabetes, the *diabète maigre* of the former author, that pancreatic lesions are met with. ROBERT SAUNDBY, M.D.

3112. *Englisch on Albuminuria in Strangulated Hernia.*—Out of 74 cases of strangulated or inflamed hernia, Englisch found albuminuria present in 39. Albumen appears in the urine at a very variable period after the commencement of strangulation, and disappears in from one to four days after successful taxis or operation. When albuminuria from visceral disease precedes strangulation, it is increased when the latter complication occurs. The presence of albumen in the urine, in a case of strangulation indicates, according to Dr. Englisch, an enterocele; its absence in similar cases implies epiplocele. The proportion of albumen in the patient's urine depends on the progress of organic changes in the strangulated intestine. In cases of gangrene of the gut, albuminuria is a very unfavourable symptom, often followed by suppression of urine after operation. Albuminuria, however slight, is always an indication for speedy operative measures. The albuminuria of strangulated hernia is always accompanied by diminution in the secretion of urine, as it increases; when the albumen diminishes in proportion, the urine is at once secreted in greater quantity. The elimination of urinary pigments is increased during the presence of this form of albuminuria. Casts are rarely found in the urine, and never until about the third day. ALBAN DORAN.

3113. *Giraudeau on Muscular Infarcts.*—The muscular tissue being provided with numerous capillaries forming a network between the fibres, is not so liable as many internal organs to infarcts due to embolism or thrombosis. Three cases reported by the author (*Revue de Méd.*, No. 6, 1884) show that the occurrence of infarcts in the muscular tissue is hardly possible, unless the arteries have lost their elasticity, while at the same time the propelling power of the heart has been impaired by defective nutrition of its walls. Under these circumstances, thrombosis or embolism of a muscular artery may be followed by the formation of an infarct, and in some cases by a rupture of the muscle.

3114. *Duclaux on the Micro-organism of the Biskra Bouton.*—M. Fournier has recently communicated to the Académie de Médecine (*Paris Méd.*, No. 24, 1884) the results of some researches made by M. Duclaux at the Hôpital St. Denis. The blood and diseased tissues of a man suffering from Biskra bouton were found on careful examination to contain a peculiar form of micrococcus, which could be cultivated in sterilised broth. An injection of fluid containing the micro-organism under the skin of a rabbit determined the formation of a sloughing ulceration, which presented some resemblance with the Biskra bouton. Injections into the veins produced very variable results.

J. S. KAESER, M.D.

3115. *Thomas on Displacement of the Transverse Colon.*—In the *Boston Med. and Surg. Jour.*, Jan. 3, 1884, Dr. Thomas reports three cases of downward displacement of the transverse colon. A *post mortem* examination was made in each case. The first occurred in a man aged 80, in whom the transverse colon was found to be greatly elongated and depressed in a U-shaped loop. Case 2 was that of a lady aged 54; the transverse colon was found narrowed, elongated, and completely prolapsed, the middle of the U being carried beneath the pubes, and lying on the bladder deep in the pelvic cavity. Case 3 was a male aged 30, the subject of advanced renal disease; the necropsy revealed a sharp flexure of the middle of the transverse colon, the apex of the flexure lying to the right and at the level of the umbilicus.

RICHARD NEALE, M.D.

DISEASES OF CHILDREN.

RECENT PAPERS.

3116. JENNINGS.—Resuscitation of the Newly Born. (*Brit. Med. Jour.*, April, p. 809.)

3117. MANBY.—Spontaneous Rupture of Hydrocephalus. (*Med. Times and Gaz.*, April, p. 554.)

3118. DAVIES.—Milk and Feeding of Infants. (*Brit. Med. Jour.*, May, p. 1027.)

3119. Sudden Death from Pressure on an Inflamed Vagus Nerve. (*New York Med. Jour.*, March 15.)

3120. Haward.—A Case of Infantile Paralysis. (*Lancet*, May, p. 973.)

3121. Sympson.—A Case of Scleroderma Affecting the Left Lower Extremity. (*Brit. Med. Jour.*, June, p. 1089.)

3122. Polatti, P.—A Case of Ankylostomiasis in a Child. (*Gazz. Med. Ital. Lomb.*, June 28, 1884.)

3123. Lunin.—Diabetes Insipidus. (*Jahrbuch für Kinderheilk.*, Band xxi., Heft 4.)

Art. 3116. *Jennings on Resuscitation of the Newly Born, and on the Treatment of Poisoning by Anæsthetics.*—Mr. C. E. Jennings, in the *Brit. Med. Jour.*, April 1884, p. 809, draws attention to the necessity of forcible traction on the tongue, as a preliminary to artificial respiration in the newly born, and also in cases of threatened death from anæsthetics. Mr. Jennings narrates a case where he was performing artificial respiration on an infant, when he noticed that the chest could not expand, since the air, immediately on entering the larynx, forced the epiglottis like a valve over the superior orifice of the organ. No one being near who could be trusted to hold the tip of the child's tongue, a darning needle was threaded and passed through the tongue; forcible traction was then made on the loop of thread, whilst artificial respiration was recommenced. Animation was rapidly reproduced, vanishing on relaxation of the tongue, reappearing at once on the renewal of traction. If death appear imminent from causes other than laryngeal obstruction, only one method remains which can possibly avert dissolution—namely, the intravenous injection of fluid (medicated or otherwise), accompanied, under most circumstances, by simultaneous depletion.

3117. *Manby on Spontaneous Rupture of Hydrocephalus.*—Mr. F. Manby, in the *Med. Times and Gazette*, April 1884, p. 554, reports the case of a primipara who was delivered on May 20, 1873, of an unusually fine male child, but having a large spina bifida of all the lumbar and one or two of the lower dorsal vertebræ, the integuments of which were so thin and transparent, that the vertebral canal was distinctly visible with its contents. The child was dressed with the usual abdominal bandage, the pressure of which caused suppurative inflammation, and thickening of the surface of the tumour, so that by August of the same year nothing remained but a fleshy mass, pressure on which caused no discomfort. About this time, however, the head was noticed to be becoming larger. By Christmas it was very large and cumbrous, and on the evening of Jan. 24, 1874, it burst, and seven and three-quarter pints of slightly bloody serous fluid were collected in a pail. The child seemed relieved by the discharge, and slept better than usual, but died seventeen hours afterwards. (In section 1354:5 of the *Medical Digest*, several similar cases are reported.)

3118. *Davies on Milk and Feeding of Infants.*—Mr. N. E. Davies, in the *Brit. Med. Jour.*, May 1884, p. 1027, contributes a letter on the feeding of babies with milk. The author states that, if mothers do not suckle their offspring, there is no safe substitute, until the period of teething has commenced, for the natural food of the infant, but cows' milk, and to the extent of rather over a pint a day is healthy sustenance. Swiss condensed milk contains forty per cent. of cane-sugar, and is not fit food for infants; but one brand, The Pure First Swiss Condensed Milk, is a perfect substitute for pure cows' milk. This is recommended to be diluted, for the first two or three months of infant life, with five times its bulk of warm water, and given to the extent of a tin a day, with the addition of a pinch of sugar of milk to each supply of the food. Great care in keeping the feeding-bottles and tubes clean is essential. [Whether an infant could consume a tin daily is questionable, and the use of the old-fashioned boat-bottle, with a simple nipple, avoids all dangers from the use of foul vibrio-swarming tubes, which resist all efforts to keep properly cleansed.—*Rep.*]

3119. *Sudden Death from Pressure on an Inflamed Vagus Nerve.*—In the *New York Med. Jour.*, March 15, 1884, a case is reported of a female child, aged 3 years, who was brought to the dispensary on account of a slight cough. A peculiar sound was noted on inspiration, but physical examination failed to reveal anything. At the end of a month, during a sudden paroxysm of coughing, the child was seized with intense dyspnœa and died. The necropsy showed miliary tubercles scattered throughout the lungs and trachea. The right pneumogastric nerve passed between an enlarged gland and the sac of an abscess in front of the first and second dorsal vertebræ. Immediately above the point where the cardiac plexus was given off, the vagus was swollen and fusiform, and on microscopic examination was found to be in a state of chronic interstitial neuritis. Cardiac paralysis must have been produced, owing to the intensifying of the pressure during the last attack of coughing.

3120. *Haward on a Case of Infantile Paralysis.*—In the *Lancet*, May 1884, p. 973, a lecture by Mr. Warington Haward is published, in which the surgical aspect of a case of infantile paralysis is dwelt upon. In speaking of the treatment of this disease, the author insists very strongly upon two things; first, that the paralysed limb be kept warm; secondly, that it must be used. At first sight it does not seem very feasible to order a paralysed limb to be used, but it must be remembered that in a great number of these cases the limb is not completely paralysed. If it be impossible for the patient to move the limb voluntarily, it must be moved for him. It is also important to remedy at the outset any deformity which has occurred, and which is an impediment to the use of a limb. Any mechanical assistance needed to aid the use of the limb should also be given, but all such as lead to the disuse of the limb should be avoided.

3121. *Sympson on a Case of Scleroderma affecting the Left Lower Extremity.*—Mr. T. Sympson, in the *Brit. Med. Jour.*, June 1884, p. 1089, records the case of a feeble ill-nourished girl, aged 5, who was admitted into the Lincoln County Hospital on account of distortion of the left foot. The skin along the inner and anterior aspect of the limb, for a breadth of three inches at the groin, and one inch on the dorsum of the foot, was pallid, glossy, and irregularly mottled with yellowish-brown spots. To the touch the skin was very tense, resistent, and elastic. The tendon of the tibialis anticus was rigidly contracted, and the foot was drawn up to an angle of 30° with the leg. The ankle-joint admitted of slight movement, but the knee was almost perfectly fixed. The left leg was half an inch shorter than the right. The patient was ordered three minims of liquor arsenicalis thrice daily, and to have the limb well anointed with vaseline. Under this treatment she improved slowly, the knee became more movable, and the

induration of the skin less marked. The tendon of the tibialis anticus was next divided, but two days afterwards the patient had a severe rigor, and the whole limb became erythematous; two sloughs, each as large as a shilling, formed over the patella. Under treatment with salines, the symptoms subsided in four days, but the knee was left perfectly stiff, and the skin resumed its former denseness. Subsequently the skin became more pliable, and a well-marked band of pigment appeared along the inner aspect of the limb; the movement of the ankle became more free, and the child gained flesh and strength. About six months after the child was first admitted she was sent home for a time, but the limb was found to be smaller in all its dimensions, the skin became more indurated, and the brown pigmentation became darker; on re-admission, the treatment was resumed as before, but a drachm of cod-liver oil was added. About nine months from the time of admission the left limb was found to be one inch and a half shorter than the right, but the greater portion of the affected skin had become supple, and a long band of pigment had made its appearance on the inner aspect of the limb. The patient was now sent home for good. And though there remained considerable deformity, it was reasonable to expect that the girl will make fair progress. RICHARD NEALE, M.D.

3122. *Polatti on Ankylostomiasis in a Child.*—This case, occurring in a child aged 7, presents several points of interest. At the age of 2 years, he went with his parents to Brazil, where he lived for five years. During the time he often suffered from diarrhœa, when he occasionally passed lumbrici. These attacks of diarrhœa were probably due to bad and insufficient food. At 7 years of age the child returned to Italy, and was at once admitted to the Hospital at Monza, with the certificate of intermittent fever. He was much emaciated; his skin was dry, scaly, of earthy-yellow sub-icteric colour. The hair was rough and dry; the tongue foul, the lips pallid; there was an intense systolic murmur at the apex; he had anorexia; hepatic dulness was increased, splenic dulness also. The urine was high-coloured, no albumen; the stools were greenish, liquid, fœtid. He had œdema of the lower extremities. Pulse 108. Temperature 39°·2 C. (102°·5 F.) A calomel and jalap powder was given. The stools contained two lumbrici. On the following day the pulse had descended to 90 and the temperature to 37°·5 C. (99°·5 F.); but about 9 P.M. the temperature rose to 40°·5 C. (104°·9 F.), and the pulse to 120. In the morning the temperature was normal, and 15 grains of quinine were given; but the attack reappeared as usual in the evening. The fever continued to run this course though many remedies were given, quinine by the mouth and hypodermically, iron, arsenic, &c. The child became daily more hydræmic, and the dropsy became general. About three weeks after admission, Dr. Polatti examined the fæces microscopically, thinking that the constant diarrhœa must be caused by ulceration of the intestine, and was surprised to find in the field of the microscope a quantity of ovules similar to those of ankylostomum duodenale. The larger of these were segmented into six cells with finely granular contents; the smaller ones were divided into two and four cells, also with granular contents, and having also a smooth thin cell-wall with double outline. With these were found the ovules of two other intestinal parasites, the trichocephalus dispar and ascaris lumbricoides. With the most careful search, no perfect parasite of either of these kinds could be found. Two grammes of tincture of male fern were given, although the little patient's state seemed hopeless. On the next day there was a marked improvement, and there was diminution of the bronchial and pulmonary œdema; pulse 104; temperature 38°. An immense quantity of the ankylostomum ovules were passed, and a few of the ascaris and trichocephalus; but, with the exception of six lumbrici, no perfect parasites could be found. The treatment was continued, 3 and 4 grammes of the tincture of male fern being given, until no ovules could be found in the fæces. The patient rapidly improved, and, with change of air and iron, completely recovered. Dr. Polatti thinks the quotidian fever could not be due to the parasites, as they are not known to cause pyretic symptoms; in the St. Gothard miners, the course of the illness was always apyretic. The co-existence of this fever, which only ceased after the administration of the anthelmintic, and the contemporaneous presence of the ankylostomum, trichocephalus, and ascaris is worthy of note. The absence of the fully formed parasite is also strange, and may, perhaps, be due to the development of the disease in this case taking place in the winter.

G. D'ARCY ADAMS, M.D.

3123. *Lunin on Diabetes Insipidus.*—The author contributes (*Jahrbuch für Kinderheilk.*, Band xxi., Heft 4) the notes of a case of this affection occurring in a girl aged 11. It had lasted for no less than nine years when it came under his treatment. The girl was well nourished, with dry skin, but otherwise healthy organs and normal temperature. She complained of continual thirst, and drank daily 8 or 9 quarts of water. The urine varied in quantity from 6 to 7½ quarts; it was quite clear, nearly colourless, slightly acid, of spec. grav. 1,001. There was no sugar nor albumen. The fæces showed eggs of tænia mediocanellata. The tapeworm was first removed, and the child remained a month in the hospital before any special treatment was commenced. The daily quantity of urine during this period averaged a little under 6 quarts (7 litres). On July 15 salicylate of soda was given; and, under the influence of 30 grains daily, the quantity of urine diminished to about 4½ quarts; but, although the dose was increased, it could not be reduced below this figure. On July 24 infusion of valerian was substituted for the salicylate, and the quantity of urine fell to rather less than 2 quarts, but could not be reduced below this point. Infusion of ergot was then administered instead, and the quantity of urine excreted sank to 38 and 40 ounces. Moreover its colour deepened, and its specific gravity rose to 1,010. The child remained in hospital three weeks after the remedy was withdrawn; but the urine remained the same, and the child drank only three-fourths of a pint daily.

RALPH W. LEFTWICH, M.D.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

3124. STRAHAN.—Hypodermic Injection of Amyl, followed by Epileptiform Convulsions. (*Jour. of Mental Science*, July.)

3125. MCDOWALL.—Delusions of Suspicion in Twins. (*Jour. of Mental Science*, July.)

3126. Mader.—Muscular Atrophy with Lichen Ruber. (*Wiener Med. Blätter*, April 10.)

3127. Mader.—Spasmodic Contraction of Respiratory Muscle. (*Wiener Med. Blätter*, April 17.)

3128. Bristowe.—Unrecognised or Masked Cerebral Tuberculosis. (*Brit. Med. Jour.*, April, p. 802.)

3129. Walsham.—The Treatment of Epileptiform Neuralgia. (*Practitioner*, July.)

3130. Féré.—Electrical Neurosis. (*Le Progrès Méd.*, July 5.)

3131. Abbe.—Supposed Nervous Origin of Dupuytren's Finger-Contraction. (*New York Med. Jour.*, April 19 and 26.)

Art. 3124. *Strahan on Hypodermic Injection of Amyl followed by Epileptiform Convulsions.*—Dr. Sydney Ringer has noticed the occasional action of the nitrite of amyl upon the heart, and the strange effect sometimes produced upon the nervous centres. He says: 'I have seen one case where a woman immediately after a drop dose turned deadly pale, felt very giddy, and then became partially unconscious, remaining so for ten minutes.' And again: 'A delicate woman, after one-thirtieth of a drop, passed in a few moments into a trance-like state.' In a case described by Dr. Strahan (*Journal of Mental Science*, July) a chronic maniac, aged 53, had suffered for several days from severe lumbago; a ten-minim dose of a 10 per cent. solution of nitrite of amyl in rectified spirits was injected hypodermically. 'Immediately after the injection the pain disappeared. He got up from the bed, and at my request stooped and touched the floor with his fingers. In, as nearly as could be guessed, about a minute and a half, he suddenly became deadly pale, and sank back upon the bed.' Then his face, head (bald), and neck became congested, and he was strongly convulsed for about half a minute. The convulsion affected the face and arms strongly, the legs slightly. The teeth were ground, and the breathing was suspended. In a few minutes, after coming out of this fit, he was attacked by a second one, during which the heart's action became very faint. He was made to inhale some chloroform, and the fits did not return. The lumbago entirely disappeared. This observation is interesting, as inhalations of nitrite of amyl have been recommended, both in this country and in Italy, to check the recurrence of epileptic convulsions.

3125. *McDowall on Delusions of Suspicion in Twins.*—The author (*Journal of Medical Science*, July 1884) describes two twins, the natural sons of a woman who generally resides in the workhouse, a strange combination of folly and vice, lewd in her conduct, and much given to lying and false accusations. The twins are now 21 years of age, and bear a close resemblance to one another, not only in their appearance (as is shown by a lithograph), but also in their mental character. They are given to fits of irascibility, under which they commit assaults; both are subject to delusions of suspicion; both are in the Asylum at Morpeth. Though they thus possess in a high degree Cicero's test of true friendship, *idem velle et nolle*, they hate one another and fight when they meet. W. W. Ireland, M.D.

3126. *Mader on Muscular Atrophy with Lichen Ruber.*—Dr. Mader, of Vienna, communicates to the *Wien. Med. Blätter* of April 10 a case of extensive muscular atrophy, combined with general lichen ruber. The patient was a sempstress, aged 42, in whom the skin-affection had begun three years before her admission into hospital, with redness over the whole body, combined with œdematous infiltration and a scaly condition of the epidermis. Four months later she was transferred to the medical side of the hospital for electric treatment, on account of the paresis which had gradually developed since the appearance of the skin-affection. The arm-muscles were conspicuously atrophic, and passive motion caused pain and resistance. There was difficulty in feeding herself, from paralysis of the muscles of the arm; but the smaller movements of the hands and fingers were normal. In the lower extremities the glutei were atrophied the most, and movement was diminished in all the joints, although least of all in the ankle. Electric tests showed well-marked degenerative reaction. Sensitiveness to the faradaic current was considerably diminished, the reverse being the case with regard to galvanism. Cutaneous sensibility and localisation appeared to be intact, except on the upper third of the thigh. Galvanism was tried, although without much hope of a cure, and the strength of the current was increased to twenty elements without any effect. The interest in this case lies in the simultaneous development of the paralysis and the skin-affection, which probably both arose from some affection of the spinal cord.

3127. *Mader on Spasmodic Contraction of the Respiratory Muscles.*—In the *Wien. Med. Blätter* of April 17, Dr. Mader, of Vienna, records a case of a confectioner's apprentice, aged 17, who was affected with a singular spasmodic contraction of the rectus abdominalis and other voluntary muscles of expiration, the contractions being induced by any attempt to speak or to walk. During sleep they ceased, and a deep inspiration kept them off as long as the breath was held. The contractions were so violent, that in a sitting posture the thighs were drawn up, and in walking the whole body was bent sharply over. The patient stated that he had been struck by his master's fist on the left side of the neck about a month before his admission, and that he had felt some difficulty of speaking ever since, although at the time there seemed to be no harm done. Under the influence of bromides, aided by tepid baths and galvanism of the sympathetic nerve in the neck, speech was restored; and the patient left the hospital by his own request after three months. The blow had probably irritated the respiratory centre to such a degree that any attempt at expiration convulsed the expiratory muscles, and Dr. Mader looks upon the case as the exact converse of singultus. Alice Ker, M.D.

3128. *Bristowe on Unrecognised or Masked Cerebral Tuberculosis.*—In the *Brit. Med. Jour.*, April 1884, p. 802, a paper by Dr. Bristowe is published, in which the author brings forward several cases in which the presence of tubercles in the brain or its membranes was concealed or rendered doubtful during life, in consequence of the association therewith of other diseases which seemed adequate to explain the patients' symptoms. One or two of the cases seem to illustrate that there is a period in the early progress of cerebral tuberculosis, in which the presence of cerebral mischief is not revealed by symptoms, and that the symptoms which attend the presence of meningeal tubercles are, for the most part, due less to the tubercles themselves, than to the inflammation which sooner or later accompanies them. This suggests the question whether the progress of cerebral tuberculosis, like that of pulmonary tuberculosis, admits of being

arrested, and whether, too, the cure of tubercular meningitis is within the range of practical therapeutics. The first half of the question is difficult to solve, but tubercular tumours are, judging from their clinical history, often very chronic in their progress; and occasionally the membranes of the brain seem, judging from *post mortem* examination, to be the only part of the body affected with tubercle. As to the latter half of the question, the author states that he has often had patients under his care, in whom the history and symptoms rendered it almost certain that they were suffering from tubercular meningitis, but in whom recovery took place. That patients recovered from meningitis of the base was certain, but whether from meningitis, the consequence or accompaniment of tubercle, Dr. Bristowe has never had the opportunity of placing beyond doubt. [The question, Is tubercular meningitis curable? receives many answers in the affirmative (*vide* sect. 1,357:6 of the *Medical Digest*), but no reply, there given, is more striking than that of Dr. Inman, who asserts that, by aid of tonics, he cures 90 per cent.—*Rep.*]

3129. *Walsham on the Treatment of Epileptiform Neuralgia.*—Mr. Walsham, in the *Practitioner*, July 1884, p. 14, writes that, of all the therapeutic agents that he has tried in the treatment of epileptiform neuralgia, opium is the one that has given the least disappointment. It must be given, however, in large doses, and it becomes a choice of evils either to bear the agony of this terrible malady, or to be reduced to the pitiable condition of an opium *habitué*. During the last few years, Mr. Walsham has had a series of six cases of this form of neuralgia under his care. The first patient had suffered for ten years, but was relieved from all pain by having the infra-orbital nerve stretched. The second had had the neuralgia nine years; it was confined to the regions supplied by the auriculo-temporal and inferior dental nerves; both these nerves were stretched, and the relief from pain was complete. The third patient was 60 years old; the pain was chiefly confined to the inferior dental nerve. This was stretched, with great relief. The fourth patient had the inferior dental and infra-orbital nerves stretched, and has remained well since. The fifth, a man 73 years old, had the inferior dental nerve stretched, and was cured. The sixth patient had suffered fourteen years, and had undergone stretching of the supra-orbital and infra-orbital nerves on several occasions without success. Mr. Walsham at length removed Meckel's ganglion and the whole of the superior maxillary nerve, after having forcibly stretched its proximal end, from the foramen rotundum to the spot where it emerged on the cheek. The patient experienced no bad symptoms, and had no pain afterwards.

RICHARD NEALE, M.D.

3130. *Féré on Electrical Neurosis.*—M. Féré describes, in *Le Progrès Méd.* (July 5), under the above title, a condition in which the subject is charged with electricity like a Leyden jar. His patient, Madame X., could attract light fragments of paper, ribbons, &c., by her fingers; her linen produced luminous crepitation when it approached her skin, and adhered strongly to it. If she rubbed a piece of cloth, or even a towel placed upon an article of furniture, the material, charged with electricity, adhered to the piece of furniture, and sparks a centimètre in length could be drawn from it. After excitement, this electrical production was most intense; dry weather favoured it, while damp had the contrary effect. When the tension was diminished by rubbing a part of the body, or by unfavourable weather, she felt languid and depressed. Her skin was so dry that it chapped very readily at the least cold. She ate too little, was thin, very anæmic, and was subject to œdema of the legs, which occurred only in damp weather. Attempts to prevent loss of electricity by silk clothing failed. But static electricity, applied in the form of the electric bath of ten minutes' duration daily, caused great improvement. He gives the following references to similar cases: Mussey (*American Journal of Medical Science*, 1877, vol. xxi., p. 377); Girard (*Gaz. des Hôpitaux*, 1876, p. 113); Arago (*Comptes Rendus*, 1846, 16 and 23 Febrier et 9 Mars); Floquin (*Gaz. Méd. de Paris*, 1846, p. 160); Goncourt (*La fille Elisa*, ch. xxviii.); Féré (*Arch. de Neurol.*, 1884, tome vii., Janvier et Mars).

ROBERT SAUNDBY, M.D.

3131. *Abbe on a Supposed Nervous Origin of Dupuytren's Finger-Contraction.*—In a contribution to the *New York Med. Jour.*, April 19 and 26, 1884, Dr. Robert Abbe, of New York, publishes several cases of Dupuytren's finger-contraction, in which there was a decided prominence of nervous manifestations resembling spinal reflex action. The following hypothesis is assumed as capable of explaining fully the symptoms observed in this disease; first, a slight injury, often quite forgotten; second, a spinal impression produced by this peripheral irritation; third, a reflex influence to the part originally hurt, producing insensible hyperæmia, nutritive tissue-disturbances, and new growth, shown in the contracting bands of fascia and occasional joint-lesions, resembling subacute rheumatism; fourth, through the tense contractions, a secondary series of reflex symptoms, neuralgiæ, general systemic disturbance, and a reflection of the trouble to the corresponding part of the opposite hand. It has been stated by Dr. Weir Mitchell that the local peculiarities of spinal arthropathies will not enable the most acute observer to distinguish them from ordinary types of rheumatism; and, again, that wounds or any form of nerve-lesions can produce, apparently, acute articular rheumatism. With this new light, according to Dr. Abbe, we must take exception to that point in the argument for the gouty origin of Dupuytren's contraction, that rheumatic attacks set in sometimes after the operation for its relief. Three cases are recorded in which rheumatism had depended on the peripheral irritation of the cutting, stretching, and forced extension, while the preceding attacks had been caused by the presence of the tightly contracted palmar band. Cases are quoted of extraordinary relief from co-existing rhachialgia and cervico-brachial neuralgia, that had defied the most skilful direct treatment, but yielded at once to the removal of the peripheral cause when the bands had been cut. There is, Dr. Abbe holds, little doubt that the local contraction is responsible for many of the symptoms for which it has been attributed to a gouty origin. In answer to the objection that it often happens that no injury can be assigned to start the trouble, Dr. Abbe calls attention to the cases in which it does happen, and points out that we are always liable to receive in the hand pricking, violence, and overstraining, and that it may be only on the thousandth occasion that the nerve-filament will be involved which will set up the trouble.

W. JOHNSON SMITH.

DISEASES OF THE THROAT AND NOSE.

RECENT PAPERS.

3132. Hahn.—Extirpation of the Larynx. (*German Surgical Congress*, 1884.)

3133. Schede.—Unilateral Extirpation of the Larynx. (*German Surgical Congress*, 1884.)

3134. Balleygnier.—The Treatment of Granular Pharyngitis by Ignipuncture. (*Thèse de Paris.*)

3135. De Saint-Germain.—Amygdalotomy. (*Soc. de Chir. de Paris.*)

3136. Ariza.—On the Importance of Laryngoscopy in the Diagnosis of some Extralaryngeal Affections. (*El Genio Medico-Quirurgico*, May 31, 1884.)

3137. Inzani, Prof. G.—The Indications for Tracheotomy and the Operation. (*Lo Spallanzani*, Fasc. i. and ii., Jan. and Feb. 1884.)

3138. Marsh.—Thermo-Tracheotomy. (*Lancet*, May, p. 845.)

3139. Taylor.—Impaction of a Bone in the Larynx. (*Brit. Med. Jour.*, June, p. 1094.)

3140. Webster.—Treatment of Catarrhal Laryngitis. (*Annali de Laringologia.*)

3141. Karis.—Congenital Atresia Narium. (*Wiener Med. Blätt.*, March 27.)

Art. 3132. *Hahn on Extirpation of the Larynx.*—At the April meeting of the German Surgical Society, E. Hahn of Berlin reported five cases in which he had practised extirpation of the larynx. In three cases, the subjects of which were respectively 43, 48, and 50 years of age, the extirpation was total. Two of these cases, in both of which it was found necessary to remove a portion of the œsophagus and the adjacent lymph-glands, ended fatally; one in the fourth, the other in the fifth week, through suppurative bronchitis and pneumonia. The third patient recovered. In the two remaining cases, one-half only of the larynx was removed. One patient had been operated on three and a half years previously at the age of 67, the other nine months previously at the age of 54. Although in each case the disease was malignant, no relapse had occurred up to April last. The patient, who recovered after total extirpation, wears a Gussenbauer's artificial larynx by means of which he can make himself well understood. The two subjects of partial resection wear simple straight cannulæ, and can with these make themselves so well understood that they refuse to let the wounds close, although they have been assured that this might be done without any risk as to breathing. By these cases, and by the statistics of operations that have already been recorded, the author hopes to prove that, in cases where it is not forbidden by the extent of the cancerous disease, extirpation of only half the larynx is to be preferred to complete removal. The latter operation, as statistics show, is attended with much greater risk. Of fifty-two cases of total extirpation, twenty-four were fatal through the operation, whilst of eleven patients who had undergone partial removal only one died. Relapse, it seems, does not occur more frequently after partial than after complete removal for cancerous disease, the functional disturbance after the former proceeding is much less, and the patient in most instances is able to dispense with the use of a cannula.

3133. *Schede on Unilateral Extirpation of the Larynx.*—Prof. M. Schede, of Hamburg, presented at the Surgical Congress in connection with Hahn's case a patient on whom, eighteen months previously, he had extirpated the right half of the larynx. The disease was an infiltrating cancer, which had involved the right vocal cord and the greater part of Morgagni's pouch, and which, in consequence of several operative attempts, had undergone some ulceration. The operation was performed in the usual way, the epiglottis being spared. The trachea during the after-treatment was protected against the secretions of the wound by the introduction of a modified form of Michael's tampon-cannula. The patient did well after the operation, and was able to swallow on the fourteenth day. He was soon able to speak distinctly, whilst wearing a simple cannula, and in July 1883 could dispense with this instrument. The operation in this case has resulted in a really absolute restoration of function. The patient has since been able to follow his calling of dentist, and his speech has never excited the attention of any of his patients. The laryngoscopic appearances were of great interest as explaining the possibility of so good a result. On the opposite side to the retained left vocal cord there had formed, as a result of cicatricial contraction, a prominent horizontal fold of mucous membrane, which was capable of performing much of the function of the diseased right cord. It was, of course, immovable, but the left vocal cord still moved, and formed with it a rima glottidis, which at the first could scarcely be distinguished from a normal one. Attention is directed by Schede to the very satisfactory progress that has since the London International Congress been made in extirpation of the larynx, both with regard to the direct results, and, when the disease is malignant, with regard to relapse. The statistics submitted to this Congress by Foulis included 32 cases of total extirpation of the larynx, in 25 of which the operation was performed for carcinoma. Of the whole number of patients, 16 died within the first fourteen days, and of the 25 subjects of malignant disease, 3 only were living at the time of the Congress. Of these one had survived the operation seven months, the other two only three months. The tables published by Solis Cohen were still more unfavourable. According to these, of 29 cases in which the operation was performed for cancer before the meeting of the Congress, 16 proved fatal within the first sixteen days, 8 died from relapse between the second and ninth months, and 1 died in the fourth month from croupous pneumonia. Very different results, however, are shown by a collection of cases of total extirpation of the carcinomatous larynx that have been reported since the London Congress. Of 32 such cases collected by Schede, 8 only proved fatal within the first twenty-five days from the immediate results of the operation. Six patients died through relapse within nine months, and 3 died without relapse in the fourth and fifth months. Fifteen were living without any relapse at the time of publication, the intervals being two years in 2 cases, twenty-one months in 1 case, and sixteen, seventeen, and eighteen months respectively in 3 other cases. Thus in several cases a cure has been obtained which may be regarded as definite; and a proof is consequently afforded of the propriety of the operation, which, with early experiences, was considered, not without good grounds, as being doubtful. Schede advocates strongly partial excision when only one half of the larynx is diseased. Unilateral is a much less serious operation than complete extirpation, and is not more liable to be fol-

lowed by relapse ; moreover, it results in very little, if any, impairment of the function of the organ.

W. Johnson Smith.

3134. *Balleygnier on the Treatment of Granular Pharyngitis by Ignipuncture.*—Dr. Balleygnier (*Thèse de Paris*) recommends ignipuncture as the best manner of treating of granular pharyngitis. He has tried all other known methods without obtaining a complete cure. The thermo-cautery is preferable to the galvano-cautery, which is not so easily manipulated, and should only be used when the granulations are small. A stem in the form of a large needle is adapted to the thermo-cautery. The patient should face the light and open the mouth wide. A spatula with a handle at right angles, and large enough to cover the entire surface of the tongue, is introduced into the mouth. The patient is told to take a deep breath, in order that the pillars of the palate may be almost effaced. The thermo-cautery is gently applied to the granulations. A white eschar forms which falls off between the fourth and eighth days. As a precautionary measure, a string of asbestos may be wound round the metallic part of the instrument, to within a centimètre of its extremity. A week ought to elapse between the cauterisations ; eight or ten generally produce a complete cure. Medical treatment should accompany cauterisation.

3135. *De Saint-Germain on Amygdalotomy.*—M. de Saint-Germain, in a communication to the Société de Chirurgie, declared that the amygdalotome of Velpean, also of Luer, are very unsatisfactory instruments, and better not used. The operation is frequently incomplete, also the tonsils are frequently left untouched. The best method is removal by means of a straight bistoury (*boutonné*). The tonsils should be held firm in a pair of forceps (*pinces à cuiller*). An incision made close to the edges of the instrument by means of a bistoury removes the entire tonsil without any danger of injuring either the palate or the pillars. When the right tonsil is removed, the left hand must perform the operation, which is decidedly inconvenient. Amygdalotomy thus performed on children is never followed by accidents, nor by hæmorrhage of an alarming nature. M. de Saint-Germain mentioned instances where excision of the tonsils among adults provoked hæmorrhage, which resulted in the death of the patient. In young girls, 14 or 15 years of age, who have not menstruated, the tonsils ought not to be removed ; the hypertrophy frequently disappears after the menses appear. M. de Saint-Germain affirms that the tonsils ought not to be removed, unless by their size they impede free breathing.

W. Vignal.

3136. *Ariza on the Importance of Laryngoscopy in the Diagnosis of some Extralaryngeal Affections.* Dr. Ariza contributes an interesting paper (*El Genio Medico-Quirurgico*, May 31, 1884) on this subject. A lady, 45, suffering from shortness of breath, hoarseness, attacks of dyspnœa, with convulsive asphyxiating cough, came to consult Dr. Ariza. These symptoms she had suffered from for four months, the illness arising from a cold and severe mental shock occasioned by the death of her daughter. On seating herself for examination, she was seized by an alarming attack of dyspnœa with convulsive cough and stridulous breathing ; her face became lead-coloured and her forehead bathed in sweat. The cough was so tumultuous and the breathing so perturbed and anomalous, that it was difficult to decide whether the dyspnœa was produced in the larynx or lower down. After the attack had passed, laryngoscopic examination showed that the vocal cords were white and healthy, but there was paralysis of the left abductor. From these symptoms, Dr. Ariza concluded that phonation was possible, because the right cord advanced to the middle line and came into contact with the left, but the left, owing to its paralysis, did not become tense or vibrate, and therefore the voice was hoarse, uncertain, and tremulous. The cause of dyspnœa must be lower down than the larynx, because, notwithstanding the paralysis, the glottic space was sufficiently ample. The immobility of the left arytenoid must be due to compression of the recurrent ; the compression of the nerve and the dyspnœa must be due to the same cause. Owing to the paralysis it was not possible to see lower down, and so examine the trachea. Dr. Ariza, noticing the extreme thinness of the neck of his patient, adopted Professor Massei's plan of directing a strong light on the neck externally, a little above the intraclavicular notch, over the first rings of the trachea. The mirror is then put in position in front of the uvula as usual. The effect is that of the camera obscura. Through the darkness of the mouth and fauces is seen, if the reflector be well placed, a soft light, somewhat like moonlight, illumining the trachea. The outlines of the glottis appear dark, but its capacity and opening are clearly perceptible. By this means a distinct pulsation of the lower part of the trachea was seen, but the lumen of the tube itself was so narrowed that the bronchial division could not be distinguished. This made the diagnosis certain, but to confirm it the chest was examined. Behind the right sterno-clavicular articulation a very slight elevation was recognised. On pressure this swelling was yielding, and pulsation could be felt. On auscultation, a systolic bruit and a clear diastolic tone could be heard occupying both periods of systole and diastole of the heart, over the whole first piece of the sternum, and extending to the left to the second and third ribs of the same side. The diagnosis of aneurism of the thoracic aorta in its early stages, or when the tumour is seated deep in the chest, and avoiding the anterior part, is directed towards the vertebral column, is sufficiently obscure. In these cases respiration, and even deglutition, may be difficult, but there is no dulness, no pulsation, nor any of the characteristic symptoms of aneurism. It is in these cases that the laryngoscope may be of the greatest use to clear up the diagnosis. The relations of the thoracic aorta with the termination of the trachea and the origin of the bronchi have been demonstrated by Türk, Schröter, Gerhard, and Luschka. Türk observed in some healthy individuals a slight oscillation of the extremity of the trachea synchronous with the cardiac systole ; and Schröter, Gerhard, and Luschka attribute the oscillation to the close contiguity of the aorta to the bifurcation of the trachea. In aneurism, instead of these slight normal oscillations, there are well-marked pulsations sufficient to obstruct the light.

3137. *Inzani on the Indications for Tracheotomy and the Operation.*—Tracheotomy for the extraction of foreign bodies, when it is possible to avoid the employment of the cannula, is followed by very mild reaction, and is well borne even by subjects of the most tender age. As a rule the cannula must not be introduced before the exit of the foreign body, or of the larger croupal membranes which might obstruct it. The cannula in tracheotomy for croup is indis-

pensable both for the entrance of air and antiseptics, and for the escape of mucus and membranes. In croup, it is not prudent to remove the cannula before the sixth day from the operation ; how long it must be kept in, differs in different cases. In chronic diseases of the larynx, the cannula is to be removed with much circumspection, and a good diagnosis of the state of the local lesion must be previously arrived at, to avoid unexpected fatal exacerbations. The mortality in croup depending often either from its spread to the bronchi, or from general bronchitis or broncho-pneumonia, the longer the operation is delayed the more probable it is that one of these morbid processes, compromising success, may be met with. In croup the expulsion of the membranes, which cause obstruction, irritation, and infection, must be encouraged as much as possible before the introduction of the cannula. Success depends on this, and on the subsequent use of antiseptics to the respiratory mucous membrane.

G. D'Arcy Adams, M.D.

3138. *Marsh on Thermo-Tracheotomy.* — Mr. Frank Marsh, in the *Lancet*, May 1884, p. 845, strongly urges the unsuitability of the performance of tracheotomy by Paquelin's thermo-cautery. The disadvantages peculiar to this method of operation are : the hard and hot eschar on the surface of the wound, preventing the finger from being used as a guide during the process of the operation ; the inflammatory action in the parts around during the separation of this eschar ; the increased liability to secondary hæmorrhage from implication of arteries in the sloughing process ; the large wound consequently formed ; and the subsequent trouble from cicatricial contraction. A case is given which well illustrates these drawbacks, except the last, as the child died on the fifth day from secondary hæmorrhage.

3139. *Taylor on a Case of Impaction of a Bone in the Larynx.*—In the *Brit. Med. Jour.*, June 1884, p. 1094, notes of a case read before the Clinical Society by Dr. F. Taylor are published. A man, aged 63, consulted Dr. Taylor, at Guy's Hospital, for a cough which he had had more than five months. An examination of the larynx was made, when a foreign body resembling bone was seen lying below the vocal cords, and extending from front to back of the larynx. There was not any inconvenience felt by the patient, except at the time the foreign body was swallowed, and for four months he had forgotten all about it, thinking it was safely disposed of. Laryngotomy was decided upon, and Mr. Golding-Bird, having divided the crico-thyroid membrane horizontally, removed the bone with Toynbee's ear-forceps. A second smaller piece, of the size of a pea, was seen impacted in the mucous membrane covering the cricoid, and was also removed. The patient made a rapid recovery. [Several cases similar to the above are noted in section 614 : 2 of the *Medical Digest.*] Richard Neale, M.D.

3140. *Webster on the Treatment of Catarrhal Laryngitis.*—In a serious case of chronic laryngitis of syphilitic origin, reported in the *Annali di Laringologia*, Dr. Webster tried the effect of a mixture containing oil of sassafras and sulphate of quinine. At the beginning of the treatment, the pharynx and larynx were the seat of a severe inflammation which had not been benefited by the ordinary treatment. After forty-eight hours most of the symptoms had disappeared, and the author thinks that this drug certainly deserves a trial in similar cases.

J. S. Kaeser, M.D.

3141. *Karis on Congenital Atresia Narium.*—At the meeting of the Wiener Med. Doctor-Collegium, on March 17 (*Wiener Med. Blätter*, March 27), Dr. Karis showed a rare case of atresia narium congenita, in a girl of 19. The nares could be seen from behind to be stopped up by two glistening membranes, perforated towards the upper part by a small opening, about the size of a pin's head. They were brought clearly into view by being illuminated anteriorly by the magnesium light. The treatment could consist only in dividing the membranes with the knife, or perforating them with the galvano-cautery, one of which Dr. Karis proposed to do.

Alice Ker, M.D.

PHYSIOLOGY.

RECENT PAPERS.

3142. Bergesio and Musso.—Contribution to the Study of the Cerebral Circulation. (*Giornale della R. Accad. di Med. di Torino*, March 1884, and *Gazz. Med. Ital. Prov. Venete*, June 21, 1884.)

3143. Tizzoni.—On the Morbid Physiology of the Suprarenal Capsules. (*Gazz. degli Ospitali*, June 22, 1884.)

3144. Lussana.—The Experimental Physiology of the Cerebellum. (*Riv. Ven. di Scienze Mediche*, July 1884.)

Art. 3142. *Bergesio and Musso on the Cerebral Circulation.*—The authors arrive at the following conclusions. 'The fact which first impresses itself on our attention is the variability of the cerebral pulse, which from anacrotic becomes tricuspid or catacrotic, without its being possible to establish a necessary relation between these variations and the states of wakefulness or of sleep provoked by hypnogenic substances. (We call those substances *hypnogenic* which, when administered, may cause sleep ; this, however, not being considered as their chief physiological effect. Under this aspect, alcohol is a hypnogenic substance.) On the contrary, the cerebral pulse may remain decidedly catacrotic ; in other words, the pressure in the vessels may remain unchanged (first experiment with alcohol) as much during the passage from wakefulness to sleep as during sleep itself.' Hence the following corollary:—The form of the pulse, and therefore also the tension of the vessels in the brain, is not connected with the states of waking or of sleep, when this is caused by hypnogenic agents. Mayo established the fact that the tricuspid form of the cerebral pulse is not characteristic of the greatest psychical tranquillity. The authors confirm this, and add that it is not necessarily observed during sleep ; on the contrary, the cerebral pulse, tricuspid in waking, may occasionally become catacrotic in sleep. 'If we compare the sleep of paraldehyde with the sleep of morphia and with that following the administration of alcohol, we see that in the first case there was relative anæmia, and in the other two endocranial congestion, two opposite states, accompanying one identical functional condition of the brain—sleep ; for this reason we think ourselves authorised to conclude that the hypnogenic modification induced by these substances resides, not in the congestion or anæmia of the nerve-centres, not in the greater or lesser pressure with which the blood circulates within the arteries and capillaries of the brain, but rather in a more

intimate modification (of chemical nature?) of the cells of the central cortex.' The congestion and anæmia, the increased or diminished tension of the vessels, either of which may be present during sleep, are therefore only concomitant, and not necessary, phenomena, of sleep, depending on the different manner in which the hypnogenic substances act on the innervation of the heart and vessels. 'Although the sleep obtained with these agents cannot be exactly compared with that due to chloroform, it may be useful to note the fact that our experiments agree perfectly, as to final conclusions, with those which Bernstein, experimenting on an entirely different method, obtained, concerning the action of chloroform. The experiments of this author prove that the prime cause of the chloroform narcosis is to be sought, not so much in the modifications induced by chloroform on the components of the blood, as in a direct action of this substance on the central nerve-elements.' G. D'Arcy Adams, M.D.

3143. *Tizzoni on the Suprarenal Capsules.*—Prof. Tizzoni has recently (*Gazz. degli Ospitali*, June 22, 1884) performed a number of experiments on rabbits, with the view of clearing up several points in regard to the office of the suprarenal capsules. The usual course was to evacuate the contents of the fibrous capsule of one or both sides. The parenchyma, in the form of a yellowish white pultaceous mass, either escaped into the peritoneal cavity or was altogether removed. Apart from a few exceptional instances of meningeal exudation and softening of the spinal cord, the animals did not appear to suffer in general health from the operation. There was as a rule little traumatic fever and suppuration. Nutrition was rarely impaired; and, in fact, an increase of weight was generally noticed within eight days. The result did not appear to be at all influenced by allowing the parenchyma to remain in the cavity of the peritoneum, where it became absorbed. The interesting point is now to come. After the lapse of some time [length of time not precisely stated, probably as a rule under a month, —*Rep.*], a brown discoloration of the muzzle was observed. Later [probably within two months more, —*Rep.*] it extended to the cavity of the mouth and of the nose. It began in the form of small spots, which gradually increased and became blended. This discoloration, it should be noted, never occurred in white rabbits. When only one suprarenal capsule was removed, the pigmentation was exclusively or chiefly on the side operated upon. The altered distribution of pigment was the only effect of the operation, and the group of symptoms that constitute Addison's disease could not be produced experimentally. Touching the histological changes, regeneration was observed in two instances, in each of which the organ had in great part been destroyed. In one of these cases, 144 days after the operation a suprarenal capsule was found in all respects identical with a normal capsule. In the other case, 26 days after the operation, a small nodule of newly formed tissue, consisting of both cortical medullary substance in process of active development was found. In the connective tissue that surrounded this nodule was a network of the sympathetic, with very fine meshes and large filaments provided with numerous large ganglion-cells. The enlargement of the remaining capsule, when only one was removed, was at the expense of the cortical rather than of the medullary substance.

3144. *Lussana on the Physiology of the Cerebellum.*—Prof. Lussana, apparently moved by Prof. Luciani's recent papers, contributes an interesting article on the functions of the cerebellum. The author traces rapidly the conclusion, reached by Flourens in 1822, that the cerebelium is a co-ordinator of voluntary movements, and the doctrine arrived at by himself and Morganti in 1851–52, that the organ is the seat of the muscular sense. To a great extent, Dr. Lussana and Dr. Luciani agree as to the facts in question; in regard to the interpretation of the facts, however, there is considerable divergence of opinion. Dr. Luciani ascribes the motor disorders to deficient muscular tone or energy; Dr. Lussana finds no evidence of muscular weakness, and he attributes the phenomena to loss of the muscular sense. It is not necessary to follow in detail the various changes in the muscular movements. It will suffice to say that the essential feature was ataxia and lack of co-ordination. Dr. Lussana leaves it to time and future observations to decide between the various explanations.

William R. Huggard, M.D.

REVIEWS.

Article 3145.

Handbook of Geographical and Historical Pathology. By Dr. August Hirsch. Vol. I. Acute Infective Diseases. Translated from the second German edition, by Charles Creighton, M.D. London: The New Sydenham Society. 1883.

The New Sydenham Society and their translator, Dr. Creighton, have performed an invaluable piece of service to the profession by the translation of this encyclopædic work. Hirsch has made this subject so completely his own, and has devoted his whole life to the accumulation of the necessary material, that its translation was absolutely necessary, especially when we consider that as a nation we are more concerned in and perhaps more responsible for the geographical distribution of disease than any other race. The present volume deals with acute infective diseases, including small-pox, cholera, plague, and typhoid fever; it is therefore of extreme interest. The author evidently aims at a purely judicial mental attitude, recording all well-ascertained facts, and pointing out the direction to which the balance of evidence tends. The article on small-pox might be fuller, especially in the section dealing with the influence of vaccination, which hardly contains the materials wherewith to meet the criticisms of those who doubt its value. In reading the contemporary literature at the time of Jenner's discovery, it is quite plainly seen that inoculation had been one of the greatest curses ever invented by experimenters with humanity; and if vaccination had done nothing else but rid the world of such a monstrous and absurd practice, it would be entitled to our gratitude. The section on cholera is especially full and complete, and at the present time is of great value. The exemption we have enjoyed for the last fourteen years, has made us forget that for the previous twenty-five years cholera was present every year in some part of Europe, though it visited our shores on two occasions only. The author's judicial mind induces him to regard most doctrines respecting cholera as unproven; but Indian sani-

tary experience shows so plainly the degree to which the disease is under the control of ordinary hygienic measures, that there is not the least ground for unreasoning panic. With a pure water-supply, and means for bringing under early treatment all cases of diarrhœa, our towns may defy the cholera ; but in those which have neglected all sanitary precautions, where surface-wells abound and houses are built on soil percolated by the contents of foul privies, there danger lurks, there the cholera fiend will find a welcome long prepared him, and there a paltry policy of parsimony will be atoned for by a tribute of death, and sorrow, and desolation.

This is a book which is by no means exclusively of professional interest. It is, on the contrary, of value and importance to all who are interested in the sanitary conditions of our population, and in the numerous sanitary questions which often crop up in the shape of international questions, owing to our extensive maritime relations. We trust the work will have a large sale, and that its contents will be widely studied. It is a mine of facts and information.

Robert Saundby, M.D.

Article 3146.

A Guide to the Study of Ear-Disease. By P. McBride, M.D., F.R.C.P.Ed., F.R.S.Ed. W. & A. K. Johnston. 1884.

In a demy octavo volume of 200 pages, clearly printed in large type, the author has brought together the main facts of the otology of the present day. This guide does not profess to be exhaustive in character. The author, indeed, tells us that throughout the work he has endeavoured to describe only those methods and instruments which appeared to him to meet the demands of rational therapeutics, and that he has sometimes merely referred to the rarer forms of ear-disease. Occasionally a little more detail would have been desirable, as on p. 63, where the cotton-wool pellet of Yearsley is described, but no mention is made of its shape. On the whole, we think the author has been wise, considering for whom he writes, in confining himself to the main practical facts of his subject. Large books on special subjects are apt to remain unread by the student and general practitioner.

The anatomy and physiology of the ear are dismissed in twelve pages, in fact, they are only treated of ; and wisely, as we think—in as far as they are of practical importance to the aurist. But little space is devoted to affections of the auricle, whilst the latest methods of treating chronic suppuration of the middle ear (boracic acid, alcohol, &c.) are clearly though succinctly described. Acute catarrh and acute suppuration of the tympanum are classed together by the author as 'acute inflammation of the middle ear.' A separation of the two is, he considers, pathologically untenable. Dr. McBride tells us that he has not had any success with hydrobromic acid in tinnitus, not even in the pulsating forms. An omission which strikes us is the want of an index, which is important to the usefulness of a handbook. The illustrations are collected at the end of the work, and consist of seven coloured and three uncoloured plates. The latter contain outline drawings of the usual instruments, and are accompanied by descriptions. Of the former, Plate I. represents four dissections of the ear in the possession of the author. They are of the natural size, and perhaps on that account are not so clear as they might be. Plates II. and III. show vertical antero-posterior sections of the nasal passages, with and without the septum, taken from preparations in the possession of Professor Turner. The point of the catheter is represented respectively hooking around the septum and in the Eustachian orifice. The remaining coloured plates contain figures of different drum-membranes. Some of these are very good, and decidedly better than that of the normal drum-head (Plate IV.).

We may add that the author's style is brief, without being obscure, and easy, without being diffuse. Dr. McBride has the faculty of leaving off before he has tired his readers. A book of this description ought to materially assist in spreading an interest in the subject, as it is admirably suited to the wants of the busy practitioner, as well as to those of the hard-worked student.

E. Cresswell Baber, M.B.

Article 3147.

Manual of Pathological Histology. By Cornil and Ranvier. Second Edition, re-edited and enlarged. Translated by A. M. Hart. Vol. II., Part 1. London : Smith, Elder, & Co. 1884.

As a matter of convenience, it is much to be regretted that the translations of Cornil and Ranvier and Ziegler should be so long in making their appearance, but we gladly welcome the fresh instalments of both, which have recently been published. The volume before us is devoted to diseases of the organs, and includes the respiratory system and the digestive system, or rather so much of the latter as is included in the alimentary canal. It is abundantly and beautifully illustrated by woodcuts in the text, which are much more convenient than lithographic plates. As the original volume has now been published some time, in some respects—notably with reference to micro-organisms—the information is not so full as is desirable ; but for generally faithful, honest, histological descriptions of morbid appearances, no book stands so high, or can be so thoroughly relied upon. The work of translation has been performed admirably, and we await with some impatience the completion of the book, which will place in the hands of English students what they have long needed—a well illustrated and complete manual of pathological histology.

Robert Saundby, M.D.

Article 3148.

Specificity and Evolution in Disease. A Paper read before the Abernethian Society of St. Bartholomew's Hospital. By W. J. Collins, M.D., B.S., B.Sc. London : H. K. Lewis. 1884.

Within the last year or two, quite a number of people have been carried out of themselves by the discovery that Darwin's views on development may be applied to the problems of the evolution of disease, and the resulting mental stimulus has produced a copious eruption of booklets and pamphlets on the subject. The one now before us is a cleverly expressed and well-written essay, suitable to the Society before which it was read, but which might reasonably have been spared to a larger public. It appears with the advantage of a letter of mild approbation from Mr. Herbert Spencer, to whom it is dedicated, but who has confessedly not been able to read more than the first few pages.

If we accept the modern doctrine of the parasitic origin of specific diseases, and at the same time admit the evolutionary hypothesis for the occurrence of specific types of living organisms, it does not require much thought to see the application of the general laws enunciated by Darwin, Spencer, and Haeckel to the development of specific diseases; and, indeed, this has been very generally recognised. But Dr. Collins goes much further than this; in his anxiety to trace the evolution of diseases, he makes short work of our well-established specific affections. The test of specificity in diseases, as in other cases, is that they breed true; but Dr. Collins believes in cases in which 'the typhoid, typhous, variolous, and diphtheritic symptoms were intimately blended,' and wants to establish the 'unity of the poison of scarlatina, typhoid and puerperal fevers, diphtheria, erysipelas, and sore-throat.'

Such teaching runs counter to all the best work of modern times, which has carefully distinguished many of these forms of disease from one another, or from others with which they were confounded. The grain of truth which underlies these crude speculations is, that specific organisms after all play only a minor part in the production of disease; the predisposing circumstances are infinitely more important, and are much more likely to be under our control. The truth of this is well shown in the success of those surgeons who rely upon pure air, cleanliness, and thoroughly efficient hospital hygiene, in place of carbolic sprays and lotions, which are only necessary when these conditions are absent, and, even in the hands of those most skilled in their use, may fail when most depends on them.

ROBERT SAUNDBY, M.D.

ARTICLE 3149.

The Influence of Heredity and Contagion on the Propagation of Tuberculosis. By A. LYDTIN, G. FLEMING, LL.D., F.R.C.V.S., and M. VAN HERSTEN. Pp. 175. London: Baillière, Tindall, & Cox. 1884.

THE three names on the title-page of this essay are those of the members of a committee appointed to prepare a report on bovine tuberculosis for the meeting of the International Veterinary Congress at Brussels in 1883. The report is from the pen of one of them, Herr Lydtin, and has been published with the title 'Die Perlsucht,' under his sole name, in recent numbers of the *Archiv für Thierheilkunde*. It has been translated into English; and Dr. Fleming, in editing the translation, has added a few notes and the report of a discussion on the same subject at the meeting of the National Veterinary Association in London in 1883. The translation is in readable English, although there are a few errors that have escaped press correction. Those who read this instructive book, and afterwards refer to it on particular points, will soon discover that it has a not uncommon German defect; it has neither table of contents nor index, nor even conspicuous headings of chapters and paragraphs in the text. This defect is all the more to be regretted, as the essay abounds in valuable facts and figures, to the whereabouts of which the reader has absolutely no clue.

The first part of the book (pp. 7–55) is occupied with a survey of the clinical characters, morbid anatomy, prevalence, and geographical distribution of bovine tubercle, and of its occurrence in a few allied species. It is the most wide-spread, says Herr Lydtin, of all maladies affecting the domesticated animals. Like most veterinary writers, the author speaks of bovine tubercle and the ordinary tubercle of medical practice, as if the facts of the one held good for the other. Thus, in the midst of a statement of the distinctive morbid anatomy of pearl-disease, we read—'Weigert has met with the characteristic nodosities of this malady in the walls of veins; and Ponfick has found an infiltration, with tuberculous ulcerations, in the thoracic canal (duct).' But these observations were made in the human subject; and, as the relation of bovine tubercle to human tubercle is one of the questions at issue, the facts should be ascertained for each separately.

The second part of the essay (pages 55 to 68) relates to the influence of heredity, and is of great interest. The disease is sometimes found in the fœtal or new-born calf. In the thirty pages following we have a discussion of the contagiousness of the bovine disease, and of the experimental production of 'tubercle' (not otherwise discriminated) by inoculation or by feeding. One of the conclusions is, that bovine tubercle is transmitted to man by the milk of phthisical animals. The evidence for this is entirely 'clinical.' Herr Lydtin does not meet the present writer's contention (probably because he is not aware of it) that such transmission cannot be alleged unless we find the distinctive traces of pearl-disease in the human body. Dr. Fleming, in a note, remarks that the evidence of identity in the form and structure of the new growths 'may be deemed presumptive evidence'—a term which seems to be more appropriate to the ordinary suspicions of infection, diseased cows being common enough to be ubiquitous. Dr. Fleming suggests a startling form of experiment to settle the matter. 'It has struck me that we sometimes waste human life—that we throw away very good opportunities for experiment by the manner in which we dispose of our criminals. I think no better use could be made of those condemned to death than by experimenting in this direction (p. 91).' Without taking the suggestion at all seriously, one may point out that phthisis is sufficiently common in convict prisons to make even that experiment ambiguous; unless the distinctive and very peculiar anatomical characters of pearl-disease be looked for in the body of the experimentee. As Mr. Simon pointed out at the International Medical Congress in 1881, there are scientific experiments and there are undesigned popular experiments. But in neither case can the true and full conclusion be drawn, unless the *post mortem* condition reproduces more or less closely the distinctive anatomical characters of the disease from which the infecting virus had been taken. Bovine tubercle is most distinctively a kind of hanging tubercle of the serous membranes; and the nodules in the interior of organs, if their growth be rapid, are apt to have the vascularity and structure of fibro-sarcomatous new formations. One of the most interesting collections of cases of hanging tubercle on the serous membranes in man is that by Dr. John Baron, of Gloucester, the biographer of Jenner. Dr. Baron thought they were solidified 'hydatids;' and it is a curious fact, unknown to Baron at the time, that Dupuy, a French writer on bovine tubercle, had sought to prove the same hydatid origin for the nodules of the veterinary disease in a book published two years before Baron's (1817).

The latter part of the essay is taken up with a discussion of preventive measures against the injurious effects of the flesh and milk of tuberculous cattle. This section, like all the preceding, contains a full handling of the problem, and its counsels are, on the whole, moderate as regards condemning the flesh. 'The milk of diseased or suspected animals should not be used for human consumption, and its sale should be rigorously prohibited.' It need hardly be pointed out that there are a good many preliminary steps to be taken in this country, before we come even within sight of such a law as that.

As regards the combating of this ever-increasing malady among dairy and farm stock, the author considers it only from the the side of heredity and contagiousness. He takes bovine tubercle to be essentially due to the invasions of a bacillar parasite. The opinion which the present reviewer has elsewhere maintained (*Brit. Med. Jour.*, Aug. 4, 1883) that it is a multiple tumour-disease with a high degree of tumour-infectiveness, and due in the first instance to vicissitudes of nutrition, would be considered as out of date (pp. 36–39). Although the author would probably admit that cows, especially in town dairies, are too often treated as if they were cast-iron milking machines, and not ruminant organisms with peculiar susceptibilities, yet he does not dwell upon that commonplace side of the veterinary tubercle problem. His proposals relate to the slaughtering of diseased animals, and to a scheme for compensating their owners.

C. Creighton, M.D.

Article 3150.

WORKS ON HEALTH-RESORTS.

Wintering Abroad: Mentone and the Riviera. By Dr. A. Drysdale. 12mo., pp. 33. London: J. S. Virtue & Co.

Monaco: the Beauty-Spot of the Riviera. By Dr. R. T. Pickering. 12mo., pp. 158. London. 1882.

The Alpine Winter Cure, &c. By Dr. A. T. Tucker Wise. 8vo., pp. 100. London: Baillière, Tindall, & Cox. 1884.

Station Thermale et Hivernale de Dax. 8vo., pp. 18. Bordeaux. 1884.

Madère comme Station d'Hiver et d'Été. Par Dr. Julius Goldschmidt. 2me edit. 8vo., pp. 36. Paris. 1884.

The first two of these works commence with a short review of other winter stations, and very naturally conclude their survey with a recommendation of Mentone and of Monaco respectively; nevertheless, they offer a good many sensible remarks. They both condemn Nice, in our opinion very far too strongly. We do not agree with Dr. Drysdale in his disparagement of sea-voyages, nor in the off-hand way in which he condemns Davos and other mountain winter-resorts. Bordighera is a far better place than he represents it to be. Both writers fortunately agree in their recommendation of Monaco, which is undoubtedly the loveliest spot on the Riviera, and is rising into favour, in spite of the gambling tables of Monte Carlo, which, it becomes clear, will be shut up a little sooner or later. Dr. Pickering gives a pretty full account of Monaco and its neighbourhood, and some of Dr. Drysdale's remarks may be of use to strangers. We observe that his treatise has no date.

Dr. Wise treats of a very different class of health-resorts, which, first frequented by Germans and but slightly by Swiss, have of late years been immensely popular with the English.

Medical opinion is still divided about the value of these stations. The life at these places is so different from ordinary life, that many who go up to visit them for a few weeks in winter, are greatly taken by the cold still air and the novel phenomenon of patients sitting on the snow while they protect themselves from the sun with umbrellas. After a time, life becomes very monotonous, and others describe Davos as a melancholy place with sickly looking visitors, and many deaths among them. In time, it will be possible to ascertain what good effects are really produced at Davos. But whatever opinion may be finally formed on that subject, there is no doubt that Davos is being over-built, and there is no reason to suppose that other Alpine valleys, similarly situated, should not be as efficacious. Accordingly, the old stations of St. Moritz and Pontresina, and the newer one of Wiesen, and lastly the head of the Maloja Pass, have all been tried as substitutes for Davos. Dr. Wise has some experience of them all. He discusses the general question of sending patients to the Alps in winter, and compares the merits of the different stations with much fairness, although he is at present attached to the last of those places, and is bound to recommend its new establishment, which appears to be fitted up in a very superior way as regards all hygienic arrangements. The main advantages of Maloja consist in the superior beauty of its scenery, in the longer period (nearly one hour) that the sun is above the mountains in the depth of winter, and in the great comparative facility with which patients who do not thrive in the mountain climate, can descend to lower elevations on the Italian slope of the Alps, and avoid the tedious journey down to Coire or to Landquart, which they have to take from Davos or Wiesen. Dr. Wise gives a full account of the influence of mountain air and of the mode of life pursued in these Alpine valleys, but does not say much of the cases for which its dry rarefied air is suited. The contra-indications, according to him, are as follows. Patients should refrain from seeking health at high elevations who suffer from any of the following diseases: 1, diseases of the heart or large vessels; 2, tendency to articular rheumatism; 3, kidney-diseases (during winter); 4, acute inflammation of throat or larynx; 5, some diseases of the bladder and prostate; persons advanced in years should not visit the mountains, unless their circulation be sound.

It is hoped, by the promoters of the new establishment at Maloja, that the discovery of a strong iron spring will prove useful. It resembles the Paracelsus well at St. Moritz in many respects. It has a larger quantity of iron, but a much smaller one of carbonic acid. The quantity of bicarbonate of potass assigned to it seems nearer the usual mark (although large, 5·08) than the excessive amount of 13·0195, which is ascribed to the Paracelsus well.

Dr. Wise has added useful meteorological tables which compare the climates of the different stations; and altogether his work contains much information that should be useful, when it is proposed to send a patient to the mountains for a winter cure.

Dax has long been known for its hot calcium waters and its mud baths. Of late years, a very large and complete bath establishment, with covered glass

galleries, has been added to the older and simpler baths. The galleries are intended for the use of patients in the winter season. More recently Dax has also put forward claims to a greater variety of springs; several in the neighbourhood have been brought into use—a sulphur one and a chloride of sodium one, and a stronger chloride of sodium, distinctly aperient, which is rather a rare thing to find in France.

We need not enumerate the various ailments which can benefit by an abundant supply of hot water, and of mud baths—which still form the main feature of treatment—or of the sulphur and chloride of sodium waters, which obviously may be useful in many cases, and can be had in a concentrated state.

Notwithstanding the admitted excellence of its establishments, no doubt Dax is a dull little town, and not in an interesting country. But it is so near Arcachon and Pau and Biarritz, that we wonder much that more of the invalids at those places, who are likely to benefit by thermal treatment, do not pay a few weeks' visit to its waters.

Dr. Goldschmidt's booklet is a short medical account of Madeira, written chiefly for French readers. Dr. Goldschmidt wonders that so few French resort to this beautiful island, with its mild equable climate. Of about 500 foreign visitors, very few are French. Nothing very novel could well be expected from a work of this kind, but our author's remarks are judicious.

He says that the climate of Madeira is found to be a sovereign remedy for diseases contracted on the West Coast of Africa. The English colonies and the International African Association avail themselves of it for their officers, and it is surprising that the French in Senegal do not also resort to the island for change.

Although, owing to neglect in management, there is considerable infantile mortality, yet under proper care infantile diseases are very mild. Children thrive well up to the age of eleven or twelve years, after which they should be sent to more northern climates. There are no fewer than 400 to 500 lepers in the island. The *bacillus lepræ* is present, and the disease is kept up by heredity.

Passing by his remarks on chest-diseases, we find that Dr. Goldschmidt recommends Madeira for marsh fever, for spleen, enlarged liver, and dysentery. The contra-indications to the climate of Madeira are rheumatism and affections of the spinal cord. Patients should arrive early in the winter season, leaving, if possible, in good English steamers, not later than the middle or end of September.

The hotels and one or two boarding-houses are good and not expensive; the arrangements are comfortable, but the cookery is English!

Slightly similar, but certainly at a long interval, is the climate of the Scilly Islands. They have been lately recommended for their equable mild climate, and for the cheapness of living in them. The climate is moist and windy, and in many respects resembles that of the neighbouring Penzance. The early vegetables, with which the London market is supplied from the Scilly Islands, attest the mildness of their climate. The mean temperature is stated at 57° in summer and 45° in winter. We fear that these islands cannot boast of many amusements for invalids who may visit them.

J. Macpherson, M.D.

Article 3151.

Postnasal Catarrh and Diseases of the Nose causing Deafness. By Ed. Woakes, M.D.Lond. London: H. K. Lewis. 1884.

The present volume forms an instalment of the third edition of the author's *Deafness, Giddiness, and Noises in the Head*, the two previous editions of which have been noticed in these columns. After an introductory chapter, giving the author's now well-known views on the correlating and reflex functions of the sympathetic system, we find the five following chapters devoted to a consideration of catarrh in its various aspects, viz., the etiology of catarrh, the præcatarrhal state, postnasal catarrh, the hygienic management of the catarrhally predisposed, the diagnosis of chronic catarrh and acute catarrh and its treatment. A chapter on chronic pharyngitis (which the author divides into chronic hypertrophic catarrh of the naso-pharynx, follicular pharyngitis, and chronic atrophic catarrh of the naso-pharynx), two chapters on hypertrophy of the pharyngeal tonsil, and postnasal vegetations, together with two on nasal stenosis and its treatment, complete the work. The præcatarrhal state is described by the author as a condition in which there is a disturbance of the equipoise between the functions of nutrition and of excretion, due to defective working power inherent in the organs primarily concerned in these processes. The possession of a diluted syphilitic taint is, the author considers, a sufficing factor in determining this condition.

Chapter IV. is somewhat loosely headed 'chronic or postnasal catarrh and its sequences,' as if these two appellations were necessarily synonymous. The author says he has seldom failed to find crystals of oxalate of lime in the urine of patients who have recently become vertiginous, and who have at the same time been labouring under the catarrhal dyscrasia.

The chapter on the hygienic management of the catarrhally predisposed appeared in the form of a separate paper, and has been already noticed in this journal (Nov. 15, 1883, p. 484). We are astonished to find no reference in the article on physical examination of the nose to the use of sunlight, which is of much value, especially in anterior rhinoscopy. In posterior rhinoscopy the author, we notice, prefers Fränkel's movable mirror. For cleansing the nasal cavities, he recommends sniffing up a lotion either from the patient's hand, or by means of his nasal irrigator. The latter consists of a little glass tube, the centre of which is blown into a bulb for holding the fluid, the arms curving upwards from the expanded portion sufficiently to retain the fluid. The end of one arm is funnel-shaped to aid the charging of the instrument, the other is tipped with soft rubber to fit the nostril. In using it, the opposite nostril is closed by the finger, and the bulb is raised until the liquid is felt in the nose. By a forcible inspiration the liquid is then drawn through the nostril, being expelled by the mouth.

The chapters on stenosis of the nasal passages are of much interest. Amongst other instructive cases, the author figures a fibroid tumour in the naso-pharynx which occurred in a girl aged 16. It completely obscured the posterior nares, and on palpation was found to grow from the vomer and the floor of the nasal fossæ. Dr. Woakes suggests it as possible that some cases of tumours of this locality supposed to grow from the base of the skull would, on more complete examination, be found to have a

similar origin. Several new instruments are recommended and figured: a nasal plough for removing strips of the inferior turbinated bone, with forceps for guiding the same, a dilator for widening the inferior nasal channel, curved scissors for abscising parts of the middle turbinated bone, and some nasal saws for removing exostoses.

The above sketch will show that the greater part of this book deals with subjects not considered in the author's previous editions, but which are nevertheless of great importance. To those who have to treat cases of deafness connected with diseases of the nose, this work will be of much value.

E. Cresswell Baber, M.B.

Article 3152.

A Treatise on Chemistry. Roscoe and Schorlemmer. Vol. III. Part II. London: Macmillan & Co. 1884.

This volume of the learned treatise of Professors Roscoe and Schorlemmer is peculiarly interesting to the medical profession, inasmuch as it includes in its pages descriptions of many of the urinary products; creatine and creatinin finding their place among the glycolyl compounds, and uric acid and its derivatives occupying an entire section of the work; whilst the carbohydrates, including, of course, the glucoses, are to be found detailed near the end of the volume.

The work is instinct with the spirit of modern chemistry, which does not rest satisfied with a knowledge of the properties, chemical and physical, nor even of the ultimate composition of bodies, but must also endeavour to represent graphically the manner in which the constituent elements are arranged and the relation which the various atoms bear to one another in the molecule.

As a rule, historical details are fully described and are often of great interest, as instances of the gradual progress of scientific inquiry. It is, however, a little remarkable not to find the name of Pavy mentioned under the head of sugar analysis, nor that of Garrod in connection with the solubility of uric acid in solution of carbonate of lithia.

The work is one which can be profitably discussed only by chemists, *i.e.* by scientific men, of no matter what profession, who have made themselves thoroughly acquainted with the preliminaries of chemistry both theoretically and practically, and who wish to gain some insight into deeper views of the constitution of and arrangement of atoms in the more complex chemical compounds.

There is one remarkable and melancholy fact in connection with this book—viz., the enormous preponderance of German, French, and Russian scientific works referred to in the foot-notes over those of English origin. We can only comfort ourselves by considering that some increase has recently become perceptible in the encouragement from without conferred upon research in this country. Those who pursue scientific investigation have surely enough difficulties to contend with, from the very nature of their work. Let the philanthropist see to it that the feeble spark is not altogether quenched for want of external support and sympathy.

Article 3153.

On Morbid Drowsiness and Somnolence. A Contribution to the Pathology of Sleep. By C. L. Dana, M.D. New York. 1884.

Dr. Dana deals with a class of cases of the greatest interest. Besides five instances of morbid somnolence observed by himself, he relates more or less briefly many examples that he has collected from various other sources. The condition in question does not include the somnolence of indolence, obesity, bad air, or organic disease; and it appears to be a kind of neurosis, akin to epilepsy or to hysteria. Dyspepsia is expressly excluded from the causation. In regard to treatment, the author has practically nothing to suggest. Various tonics and stimulants, however, are mentioned.

William R. Huggard, M.D.

Article 3154.

Vivisection in its Scientific, Religious, and Moral Aspects. By E. D. Girdlestone, B.A. Pp. 68. London: Simpkin, Marshall, & Co. 1884.

This is a timely and useful contribution to a controversy in which, with few exceptions, the knowledge has been on one side and the prejudice on the other; in which, however, the issues are clear enough to allow reasonable men and women to form a sound judgment. Mr. Girdlestone is neither a physiologist nor a member of the medical profession, and writes from the point of view of an intelligent, unbiassed outsider.

The first chapter, on 'the insensibility of brutes to pain,' exposes the unscrupulous assertion of one of the most reckless opponents of scientific medicine, that 'brutes are no less physically sensitive than men.' Most of the facts cited are authentic; but the doctrine that 'of course, those animals which have got no brains cannot feel at all' is not Professor Owen's, and (like most others with the same preface) is not true. The perception of pain is, we have every reason to believe, subject, like consciousness in general, to wide variations which do not exactly follow anatomical structure. The amount of pain felt from the same injury or disease, measured not by assertions of the patient, but by definite effects upon sleep, upon the pupils, the pulse, the skin, and the appetite, varies much more among human beings than is commonly supposed. Dogs also differ among themselves; and the difference between the suffering felt by dogs generally, and by rabbits or guinea-pigs, is probably scarcely less than that between the suffering of dogs and of men. Pain in fishes is probably exceedingly small compared with that of warm-blooded animals; and in the case of invertebrate animals so small as scarcely to be comparable to what we call pain in ourselves. But neither the absence of a brain, nor of a nervous system altogether, can make impossible the existence of a phenomenon which, in however rudimentary a form, seems to belong to all living creatures, and which is connected by continuous gradations with the sense of pain in man himself. Long before we reach the lowest grade of organic life, we may, however, believe, that perception (*i.e.* conscious sensation) is reduced to a minimum, so that 'pain' exists no more, and pleasure is only the dim satisfaction of a man in healthy sleep, and movements follow stimulus with the mechanical regularity of a well-made clock.

The second chapter, 'on the practical utility of vivisection,' dwells fairly and forcibly on the well-known facts succinctly stated in the 'Memorandum' issued last year by the Association for the Advancement of Medicine by Research. Mr. Girdlestone has no difficulty in dealing with the two or three insignificant exceptions to the practically unanimous verdict of the medical profession in this country, in America and on the Continent.

In the following chapters the moral question of the duties of man to animals is considered. Miss Cobbe's characteristic sentence, that vivisection is 'a more devilish offence than drunkenness, lying, or theft' receives due attention, and appropriate scriptural and ethical principles are adduced.

Lastly, the alleged demoralisation produced by the practice of vivisection is denied, and the assertion easily refuted; but the author turns it back on the assailants of physiology, and shows how deeply demoralising is the practice of abuse, the habit of misstatement, and the refusal to open the mind to argument.

This candid and interesting pamphlet concludes with the following sad but only too appropriate quotation from Prof. Max Müller. 'The older I grow, the more I feel convinced that nothing vexes people and hardens them in their unbelief and in their dogged resistance to reforms, so much as undeniable facts and unanswerable arguments.'

There are, however, many 'anti-vivisectionists' who are actuated by a generous sympathy with suffering and praiseworthy hatred of cruelty, which are only misdirected by imperfect knowledge. They only need to be better informed, and they will find abundant and useful exercise for their honest indignation, but it will be directed against others than scientific experimenters. To such open-minded and fair opponents, we cordially recommend Mr. Girdlestone's pamphlet.

ARTICLE 3155.

Mittheilungen aus der Chirurgischen Klinik zu Tübingen. Herausgegeben von Professor PAUL BRUNS. Heft 1 and 2. 1883–84. Tübingen: H. Laupp.

THESE are the first two parts of a promised series of reports on the surgical work in the clinic at Tübingen. Of the twelve papers given here, four have been contributed by Prof. P. Bruns, the Principal of the Clinic, and the remainder, under his direction, by his assistants and pupils. These reports are published with the objects of making known the extent and clinical value of Prof Bruns's department, and of imparting such therapeutical results as have been gained there. We meet in these two volumes with a good example of the activity and thoroughness of clinical work in Germany, and of the abundance of instructive clinical material even in small German hospitals. Although the surgical clinic at Tübingen until quite recently consisted of less than one hundred beds, we find that most of these reports are based on extensive series of interesting cases of injury or surgical disease. Of the twelve contributions, all of which have some value, we would refer the reader more especially to those by the editor on 'Fracture and on Excision of the Knee;' by Dr. Weibel, on 'The Statistics of Amputation;' and by Dr. Mogling on 'Surgical Tuberculoses.' W. JOHNSON SMITH.

ARTICLE 3156.

A Year-book of Surgery for 1883. Edited by CHARLES H. KNIGHT, M.D. G. P. Putnam's Sons. New York.

THIS, which seems to be the first of the surgical volumes of a proposed series of year-books dealing with medical subjects, presents a good and useful review of such advance as was made in surgery in 1883. Having found it impossible to approach completeness in this work, Dr. Knight has attempted to give abstracts of only the more important contributions to surgical science in the current literature of the past year. The book, therefore, is not crowded with a number of short notices of papers having very little, if any, value, but deals fully with such subjects as have of late excited much interest and discussion among surgeons. The sections on nerve-stretching and nerve-suture, on resection of the pylorus, on nephrotomy and nephrectomy, and the whole of the chapter on the surgery of the genito-urinary organs, have been well compiled. The editor has supplied a very good and useful introduction, and the whole volume may be commended as a fair model of what a year-book of medical progress should be. W. JOHNSON SMITH.

ARTICLE 3157.

The Book of Prescriptions. By HENRY BEASLEY. Sixth Edition. London: J. & A. Churchill. 1883.

THIS book of nearly 600 pages contains upwards of 3,000 prescriptions, collected from the practice of English and foreign physicians and surgeons; it comprises also a list of materia medica, lists of the doses of pharmacopœial or established preparations, and an index of diseases with remedies. Each drug is treated of under the following heads:—its source, therapeutics, the diseases to which it is applicable, its solubility, the best vehicles for its administration, its incompatibles, the antidotes, its idiosyncrasy. The signs and abbreviations, and the more common Latin words and phrases occurring in prescriptions, with tables of weights and measures of various kinds, are placed at the beginning of the book. Next comes the list of materia medica, comprising the bulk of the work, and arranged in alphabetical order. The information given under each name is scarcely up to the practice of the day; many old drugs have several prescriptions allotted to them, whilst the newer preparations are often dismissed with a very scanty notice. Altogether the book seems to be chiefly suited to the pharmaceutical student or to the medical student who may desire to know how a prescription should be framed; though even in this respect its instructions are scarcely stated with sufficient precision, as the directions for the use of the prescriptions are sometimes given at length in English or Latin, whilst at other times they are given in curtailed Latin. Those members of the medical profession upon whom falls the chief work of prescribing for the sick and ailing members of the community are not likely to derive much advantage from a perusal of these pages. The work is a new proof of the industry of its author, but seems scarcely calculated to give that assistance to medical practitioners which, with the addition of a little more information in its pages, it might undoubtedly have conveyed.

NEW INVENTIONS.

Article 3158.

THE NEW BOLANACHI CHOCOLATE.

It is singular that a more important use has until recently not been found for that freely growing plant the ceretonia bean (*ceretonia siliqua*), than the feeding of cattle, which appears for centuries past to have been its chief use. Some time since, however, M. Bolanachi, a Turkish gentleman, whose friends are large growers of the bean, conceived the idea of turning it to better account, and commenced experiments with a view to extract its saccharine constituents. After a time he succeeded in producing, to use the words of Professor Attfield, 'a sweet, clear, honey-like extract,' and this he determined to utilise in the manufacture of chocolate, instead of using sugar. The result of his experiments has been the establishment of a large factory at Spa Road, Bermondsey, for the manufacture of chocolate, fitted up with machinery of the most approved character for preparing it in large quantities. In the making of the chocolate the cocoa bean, *without the husk*, and without starch or flour, is used in combination with the syrup of the ceretonia bean, and these two ingredients are the only ones that enter into the compound. Professor Attfield's report is given below, and the writer has visited the factory and closely watched the entire process of manufacture. At present the chocolate is sold in the form of a thick paste, which is put up in tins containing 1 lb., and sold retail at one shilling each. In preparing for use no boiling is required, so that the chocolate pot and the troublesome churning with the chocolate 'mill' are dispensed with; all that is necessary is to take a teaspoonful of the paste to each breakfast-cup, and add to it boiling milk or water, when a perfectly soluble infusion is obtained, drinkable to the last drop, not a particle of sediment being left. If milk be used, the flavour of this chocolate will be equal to that of the most expensive chocolate; but with water, though not so rich in flavour, it is but a shade less agreeable, and will be preferred by many. In this form it is better adapted for children. Although the cocoa-butter is not extracted, it is not observable in the infusion, and can be assimilated by persons of weak digestion, who thrive upon it. It has been tried by persons who have not been able to take even the dietetic cocoas, and who express themselves in the most favourable terms respecting the digestibility of this form of chocolate.

The Bolanachi chocolate possesses one decided advantage, in that it is a valuable addition to the dietary of the poor. It is a pure, honest article of consumption, and far cheaper, when its dietetic value is taken into consideration, than the bulk of the cocoas now sold, many of them at a much higher price. At the International Health Exhibition, the crowds that are daily to be found around the stand where this chocolate is made only with water, and offered to the visitors to taste, testify to the manner in which it is appreciated by all classes, who further give practical proof of their approval by purchasing it in considerable quantities.

The analysis, as described by Professor John Attfield, is as follows:—

Bolanachi's chocolate paste, Dr. Attfield says, I have seen made on a large scale at the factory. The best quality was prepared from *forty* parts of cocoa, and *not* ordinary sugar, &c., as usual, *but sixty* parts of sweet clear honey-like extract of the well-known *ceretonia siliqua* or 'St. John's bread.' Samples of these taken from bulk by me yielded:

Cocoa:			
Moisture	1·61		
Cocoa butter	21·10		
Albuminoid matter	6·55		
Theobromine	·71		
Phosphate of potassium, &c.	1·32		
Starch, gum, cellulose, &c.	8·71		
		40	
Ceratonia extract:			
Moisture	14·09		
Albuminoid matter	1·47		
Sugar	34·80		
Dextrin, &c.	9·42		
Phosphate of potassium, &c.	·22		
		60	
			100

MISCELLANY.

Dr. Carl Wedl, Professor of Histology in Vienna, retires on a pension, with the title of 'Hofrath.'

Sir Erasmus Wilson, lately President of the Royal College of Surgeons of England, died on Aug. 8, at the age of 75. He will be remembered as the liberal founder of two professorships, one in the Royal College of Surgeons and the other in the University of Aberdeen; and as having brought to London, at his own expense, the celebrated Egyptian obelisk known as 'Cleopatra's Needle.'

Antiseptic Experiments in a Mortuary Vault. Dr. C. A. Cameron (*Dublin Jour. of Med. Science*) publishes an account of some experiments made by him upon the atmosphere of the vaults of the church of St. Michan, in Dublin, which have long possessed a reputation for preserving bodies interred within them. This may in part be due to the dryness of the air; but is also, according to Dr. Cameron, the result of the absence of dust. He exposed ten tubes of infusion of melon, prepared after Tyndall's method, to the air of the vault for six weeks in summer, at the end of which time only five had undergone putrefactive changes. On being removed to the laboratory of the College of Surgeons the remaining tubes putrefied in a few days.

Dissolved Oxygen of Water.—In the *Lancet*, June 1884, p. 1040, an article alludes to the lecture recently delivered by Professor Odling at the Royal Institution, on the important part played by water in the oxidation of sewage. At a temperature of 70° F. there are 2·58 tons of oxygen in every 10,000,000 cubic feet of water, increasing to 3·16 tons at the temperature of 45°, thus showing a difference of over half a ton per 10,000,000 cubic feet between the summer and winter temperatures. In some experiments made by Dr. Tidy in June, the water from Teddington to Battersea showed an average percentage of aeration of 78, as compared with possible aeration at Greenwich of 38 per cent., and at Purfleet of 26. Experiments carried on from July to November by Dibbin and Dupré showed that the percentage of aeration at Richmond was 86, decreasing to 40 per cent. at Woolwich, and 24 per cent. at Erith, but recovering to 75 per cent. by the time Southend was reached. It has been calculated that if a volume of water containing 35 per cent. of sewage matter be allowed to flow for one mile exposed to the air, the whole of the sewage would become oxidised.

The London Medical Record.

GREAT BRITAIN AND IRELAND.

MEDICAL QUALIFICATIONS.

The number of examining bodies in the United Kingdom which grant degrees and diplomas is twenty. The qualifications obtainable from them are as follows.

1. *Royal College of Physicians of London:* Diplomas of Licentiate, Member, and Fellow.
2. *Royal College of Surgeons of England:* Diplomas of Member and Fellow.
3. *Apothecaries' Society of London:* Licence.
4. *University of Oxford:* Degrees of Bachelor of Medicine and Doctor of Medicine.
5. *University of Cambridge:* Degrees of Bachelor of Medicine and Doctor of Medicine, and Bachelor of Surgery and Master in Surgery.
6. *University of London:* Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, and Master in Surgery.
7. *University of Durham:* Licences in Medicine and in Surgery; Degrees of Bachelor of Medicine, and Doctor of Medicine, Bachelor of Surgery, and Master in Surgery.
8. *Victoria University, Manchester:* Degrees of Bachelor of Medicine, Doctor of Medicine, and Master of Surgery.
9. *Royal College of Physicians of Edinburgh:* Diplomas of Licentiate, Member, and Fellow.
10. *Royal College of Surgeons of Edinburgh:* Diplomas of Licentiate and Fellow.
11. *Faculty of Physicians and Surgeons of Glasgow:* Diplomas of Licentiate and Fellow.
12. *University of Aberdeen:* Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery.
13. *University of Edinburgh:* Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery.
14. *University of Glasgow:* Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery.
15. *University of St. Andrew's:* Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery.
16. *King and Queen's College of Physicians in Ireland:* Diplomas of Member, Licentiate, and Fellow, and Licentiate in Midwifery.
17. *Royal College of Surgeons of Ireland:* Diplomas of Licentiate and Fellow; and Diploma in Midwifery.
18. *Apothecaries' Hall of Ireland:* Licence.
19. *University of Dublin:* Licences in Medicine and in Surgery; Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, and Master in Surgery.
20. *Royal University in Ireland:* Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery; and a Special Diploma in Obstetrics.

The Royal College of Physicians and Surgeons in Edinburgh, and the Faculty of Physicians and Surgeons in Glasgow, have instituted a conjoint examination for the conferring of licences.

In addition, the Royal Colleges of Surgeons and the Faculty of Physicians and Surgeons of Glasgow grant licences in Dental Surgery, which are registrable under the Dentists' Act.

Certificates and diplomas in State Medicine and Public Health (which at present are not registrable) are conferred after examination by the Universities of Cambridge, London, Durham, Edinburgh, Glasgow, and Dublin; by the Royal University of Ireland; by the Royal College of Physicians in Edinburgh; by the Faculty of Physicians and Surgeons of Glasgow; and by the King and Queen's College of Physicians in Ireland.

The following is a general summary of the conditions required on the part of candidates for examination; but, for further details, our readers must consult the regulations issued in the Student's numbers of our contemporaries; or apply to the officers of the respective Universities, Colleges, and Halls.

The regulations of the Examining Bodies are, with very few exceptions, framed in accordance with the Resolutions and Recommendations of the General Medical Council.

Every medical student is required to be registered at the office of the General Medical Council; prior to which he must have passed an examination in subjects of general education. As evidence of this are recognised:—1. The possession of a degree in Arts of an University of the United Kingdom or of the Colonies, or of some University recognised by the Medical Council; 2. A certificate of having passed an examination in subjects of general education conducted by some one or other of the educational bodies, a list of which is given with the 'Recommendations of the General Medical Council.' No person is allowed to be registered as a medical student unless he shall have previously passed a preliminary examination in the following subjects of general education: 1. English Language, including Grammar and Composition; 2. English History; 3. Modern Geography; 4. Latin, including Translation from the Original, and Grammar; 5. Elements of Mathematics, comprising (*a*) Arithmetic, including Vulgar and Decimal Fractions; (*b*) Algebra, including Simple Equations; (*c*) Geometry, including the first two books of Euclid, or the subjects thereof; 6. Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics (this subject may be passed either as preliminary, or before, or at the first professional examination); 7. One of the following optional subjects: (*a*) Greek; (*b*) French; (*c*) German; (*d*) Italian; (*e*) Any other modern language; (*f*) Logic; (*g*) Botany; (*h*) Elementary Chemistry. The preliminary examination having been passed, the student should at once register, as the commencement of the course of professional study is not recognised as dating fifteen days earlier than the date of registration. Forms for registration are supplied by the licensing bodies and at the schools and hospitals.

After passing the preliminary examination, the student may commence his medical education in one of the following ways (according to the regulations of the licensing body with which he intends to become connected): 1. By attendance for one year on the practice of a provincial hospital or other public institution recognised for this purpose; 2. As

the pupil, for one year, of a legally qualified surgeon holding sufficient public appointments to afford such opportunities of practical instruction as shall be satisfactory to the authorities ; 3. By entering at once at a recognised medical school.

The minimum period of medical study required is forty-five months from the date of registration as a student, of which time at least two years and a half must be passed at a recognised medical school. For the degrees of the Universities (except that of London and the Royal University in Ireland) the candidate is required to spend a portion of the time of medical study at the University which grants the degree, or at a college in connection therewith.

To obtain a degree, diploma, or licence, two examinations at least in professional subjects must be passed ; first in the elementary subjects—Chemistry, Anatomy, Physiology, and Materia Medica ; and afterwards in the practical subjects. The final examination, which must not be passed until the completion of the fourth year of study, comprises :—1. Pathology (including Morbid Anatomy) ; 2. Medicine (including Medical Anatomy, Clinical Medicine, and Therapeutics) ; 3. Surgery (including Surgical Anatomy and Clinical Surgery) ; 4. Midwifery ; 5. Forensic Medicine.

Special arrangements exist at the Universities of Durham and St. Andrew's for granting degrees to practitioners of medicine above forty years of age.

INSTRUCTION IN THE MEDICAL SCHOOLS.

THE medical schools in London are those of St. Bartholomew's, Charing Cross, St. George's, Guy's, the London, St. Mary's, the Middlesex, St. Thomas's, and Westminster Hospitals ; and the Medical Faculties of King's and University Colleges. To these may be added the London School of Medicine for Women, with which the Royal Free Hospital is connected for the purpose of clinical instruction, and Mr. Thomas Cooke's School of Anatomy and Surgery.

In the provinces in England there are the medical departments of Queen's College, Birmingham, Owens College, Manchester, and the Medical College of the University of Durham, at Newcastle-on-Tyne ; the Medical School affiliated to University College, Bristol ; the Medical Faculty of University College, Liverpool (Royal Infirmary School of Medicine) ; the medical school in connection with the Yorkshire College at Leeds, and that attached to the Firth College in Sheffield. The Universities of Oxford and Cambridge do not profess to give a complete education, but instruction in many branches is provided for at Cambridge.

In Scotland, the medical schools in which a complete course of professional education is given are those attached to the Universities of Aberdeen, Edinburgh, and Glasgow ; the Extra-academical School in Edinburgh ; and Anderson's College, the Royal Infirmary School of Medicine, and the Western School of Medicine, in Glasgow.

In Ireland, the medical schools are, the School of Physic in Ireland, the School of the Royal College of Surgeons of Ireland, and the Queen's Colleges at Belfast, Cork, and Galway. There are also several medical schools in Dublin : viz., the Carmichael College of Medicine and Surgery, the Catholic University, and the Ledwich School of Anatomy, Medicine, and Surgery.

For information regarding these institutions reference must, as we have already said, be made to the published prospectuses. We shall, however, endeavour to classify a part of the information therein contained under certain heads, viz., Clinical Instruction ; Practical Surgery ; Special Departments ; Practical Physiology ; Hospital Appointments ; Tutorial Instruction ; and Scholarships, Exhibitions, and Prizes.

CLINICAL INSTRUCTION.—At all the hospitals connected with medical schools, the physicians and surgeons deliver at stated intervals lectures on the cases under their care, in addition to making comments during their visits to the wards or in the operating theatre. In some instances, special provision is also made by the appointment of one or more of the hospital staff as clinical professors or lecturers ; and in several of the hospitals a certain number of beds are specially devoted to the purpose of clinical instruction. At Guy's Hospital, forty patients are set aside in the medical wards, and are visited and their cases lectured on by the physicians in the winter and by the assistant-physicians in the summer session : the surgeons also select cases for clinical instruction. A similar arrangement exists at the London Hospital, where two wards are devoted to the express purpose of teaching clinical medicine ; the cases being lectured on by the physicians in the winter, and by the physicians or assistant-physicians in the summer. Special clinical professorships in medicine and surgery, in addition to the ordinary clinical lectures given by the physicians and surgeons, exist at the King's and University College Hospitals. In the former, the professor of clinical medicine is Dr. George Johnson ; and the professors of clinical surgery are Mr. John Wood and Sir Joseph Lister. In University College Hospital there are two special chairs, known as the 'Holme Professorships' of Clinical Medicine and Surgery. The Holme professor of clinical medicine is Dr. Wilson Fox, who delivers clinical lectures, on Tuesdays and Thursdays, on the significance of the general signs of disease, and on the special modes of examination, diagnosis, and treatment of individual diseases. There are also two assistant teachers of clinical medicine, Dr. Gowers and Dr. Barlow, who hold classes for instruction in physical examination, the investigation of diseases of the circulatory, respiratory, and nervous systems, the examination of the urine, &c. The Holme professor of clinical surgery, Mr. Christopher Heath, gives a clinical lecture once a week, and also holds a weekly clinical examination on surgical cases in the operating theatre ; these examinations, while open to the whole class, being specially intended for the instruction of the senior students. Mr. A. E. Barker and Mr. Godlee are assistant-professors of clinical surgery. A special course of lectures on clinical surgery is given in St. Thomas's Hospital, the lecturer being Mr. John Croft. In Cambridge, clinical instruction in medicine and surgery is given at Addenbrooke's Hospital throughout the year. At Leeds, clinical classes meet at appointed hours to receive instruction in the wards from the physicians. In the Liverpool Royal Infirmary, Dr. Glynn (one of the physicians) gives, once a week during the winter, practical instruction in clinical medicine and the methods of physical diagnosis. Two clinical tutors, in the Medical and Surgical Wards, have also been appointed. A medical and a surgical clinical lecture are given every week in the Manchester Royal Infirmary. Elementary and

Advanced Clinical Classes are formed by the members of the Infirmary staff at each of the trimestral periods, commencing with October, January, and May. In the Infirmaries of Aberdeen, Edinburgh, and Glasgow, clinical lectures on medicine, surgery, and midwifery are delivered by the medical staff of each institution. The Universities of Edinburgh and Glasgow have special professors of Clinical Medicine and Surgery. In the medical schools of Ireland, clinical courses are given through the session.

In connection with the subject of Clinical Instruction, reference must be made to means provided at several hospitals for the special purpose of training the students in the observation of cases. At the Charing Cross Hospital, a course of practical medicine is given by Dr. M. Lubbock. It includes the methods of examining organs, the examination of morbid products, case-taking, the management of the sick-room, &c. At St. George's Hospital, a similar course is given by Dr. Whipham. In Guy's Hospital, the ward clerks (of whom 150 or more are appointed during the year) are assisted in the examination of cases and the preparation of reports by the medical and surgical registrars, who also instruct them in physical diagnosis and in chemical and microscopical investigation. Similarly, at the London Hospital, the clinical clerks and dressers are assisted by the house-physicians and house-surgeons. At several of the medical schools there are medical tutors, who instruct the students in the physical examination and systematic description of cases. The provision made at University College Hospital has been referred to above. Classes for medical demonstration are held in the Manchester Royal Infirmary twice weekly during the summer by two of the medical officers; in which classes instruction is given in anatomy as applied to medicine, in physical and chemical examination, &c. In the University of Edinburgh, a class for instruction in clinical medicine is held in the wards of the Royal Infirmary by the clinical tutor.

Practical Surgery.—At most of the schools, special provision is made for instruction in this important branch of medical education. The courses embrace such subjects as the application of anatomy to surgery on the living person or the dead body; the methods of proceeding, and the manipulations necessary, in order to detect the effects of diseases and accidents; the performance of operations on the dead body; the use of surgical apparatus; the examination of diseased structures, as illustrated by preparations and recent specimens. The course of practical instruction is generally distinct from that of systematic surgery, and is in several instances given in the summer session. In the Liverpool School of Medicine, the lectures on Systematic Surgery are given thrice weekly, and there is a concurrent course of Practical Surgery twice weekly; besides which, a course of Operative Surgery is given in the summer.

Special Departments.—Due provision is made for both theoretical and practical instruction in *Midwifery and Diseases of Women*, so as to enable students to meet the requirements of the examining bodies.

Ophthalmic Surgery is taught by lectures and observation of cases at all the London schools; each hospital receiving ophthalmic patients except the Charing Cross, the pupils of which are admitted to the practice of the Royal Westminster Ophthalmic Hospital. As far as can be gathered from the prospectuses, the material available for the practical teaching of this subject (as far as regards in-patients) is as follows: St. Bartholomew's Hospital, 26 beds; Charing Cross (Royal Westminster Ophthalmic Hospital), 50 beds; Guy's Hospital, 50 beds (also about 3,000 out-patients); London Hospital, 12 beds. The other hospitals have beds for ophthalmic cases, but the number is not stated. Provision for teaching ophthalmic surgery, theoretical and practical, is made in the provincial schools. In the Universities of Aberdeen and Glasgow, instruction in ophthalmic surgery is given; and the students are admitted to see the practice of ophthalmic institutions in those cities. In the Extra-academical School of Edinburgh, and in the Schools of Medicine in Glasgow, courses of lectures on the subject are given. In Ireland, provision is made for the teaching of ophthalmic surgery in most of the medical schools.

Aural Surgery is taught as a special branch at all the London medical schools, and at the Leeds School of Medicine and the Bristol, Manchester, and Newcastle Royal Infirmaries among the provincial schools; also in the Extra-academical School in Edinburgh, and in Anderson's College and the Royal Infirmary School of Medicine in Glasgow.

Diseases of the Throat.—Special instruction in the diagnosis and treatment of diseases of the throat and larynx, and the use of the laryngoscope, is given at St. Bartholomew's Hospital by Mr. Butlin; at King's College Hospital by Mr. Rose; at the London Hospital by Dr. Morell Mackenzie, who delivers a course of lectures on the subject; at St. Mary's Hospital by Mr. Norton; at the Middlesex Hospital by Mr. Hensman (with Diseases of the Ear); at St. Thomas's Hospital by Dr. Semon; at University College Hospital by Dr. Poore; at the Westminster Hospital by Dr. De Havilland Hall; at the Bristol Royal Infirmary by Mr. Harsant; at the Manchester Royal Infirmary by Dr. H. Simpson; at the Newcastle-on-Tyne Infirmary by Dr. Hume (with Diseases of the Ear); in the Edinburgh Royal Infirmary by Dr. McBride (with Diseases of the Ear); and in the Glasgow Royal Infirmary by Dr. E. Watson.

Diseases of the Skin.—For the teaching of this important department of medicine, special provision is made in all the London Hospitals, in the Bristol General Hospital, in the Manchester Royal Infirmary, and in the Newcastle-on-Tyne Infirmary. Demonstrations of cases, and clinical lectures, are given at stated intervals, generally once a week. In University College Hospital, Dr. Radcliffe Crocker, the physician in this department, gives clinical lectures on diseases of the skin once a fortnight. A course of lectures is given in the Edinburgh Extra-academical School. In Dublin, a course of instruction on diseases of the skin is given at the Adelaide Hospital.

Orthopædic Surgery is taught at St. Bartholomew's Hospital by Mr. Walsham; and at the Westminster Hospital by Mr. Richard Davy.

Mental Diseases.—Lectures on Psychological Medicine are delivered as a separate course in most of the London schools. Special arrangements for clinical instruction are made in several instances; thus the students of St. Bartholomew's Hospital have access to a large public asylum; those of Guy's Hospital are admitted to Bethlem Hospital, and those of the London Hospital to Bethnal House. Two stu-

dents of the London Schools, qualified to practise, are appointed for six months as resident clinical assistants in Bethlem Hospital. At Cambridge, clinical instruction is given at the county asylum at Fulbourn. At the Leeds School of Medicine, the students attend the West Riding Lunatic Asylum at Wakefield, where Dr. Major, the Medical Director, gives clinical lectures in addition to a course of systematic lectures at the school. In Manchester, a course of clinical lectures on mental diseases is given to senior students of Owens College by Mr. G. W. Mould, at the Asylum in Cheadle. At the Newcastle-on-Tyne College, instruction in psychological medicine is given by Mr. Wickham, medical superintendent of Coxlodge Asylum. In the University of Edinburgh, Dr. Clouston gives a course of Medical Psychology and Mental Diseases, with practical instruction at the Morningside Asylum. In the Extra-academical School, a similar course is delivered by Dr. Batty Tuke. In the Glasgow Royal Infirmary School of Medicine, a course of lectures on Mental Diseases is given by Dr. A. Robertson, in the City Parochial Asylum. In Dublin, special courses of lectures on mental diseases are given in the Richmond, Whitworth, and Hardwicke Hospitals, adjoining which is a large asylum containing over 1,000 patients. The lectures on psychological medicine are mostly delivered during the summer session.

Public Health.—Special courses of lectures on this subject are given at St. Bartholomew's, Charing Cross, Guy's, the Middlesex and St. Thomas's Hospitals, and at King's and University Colleges. At St. George's Hospital it is included in the course of Medicine; and at the London, St. Mary's, and Westminster Hospitals, in that on Forensic Medicine. In University College, besides the lectures, instruction in the chemical and microscopic examination of air, water, and food, is given in the hygienic laboratory. In several of the provincial schools, the subject is included in the lectures on Forensic Medicine. In Owens College, Manchester, lectures on hygiene are delivered by Dr. Ransome; in the Bristol Medical School by Mr. Davies; in the Newcastle College of Medicine by Dr. Armstrong; and in the Sheffield Medical School by Dr. Drew. In Scotland, also, the instruction in Public Health is given in connection with the lectures on Medical Jurisprudence. In Dublin there is a professorship of Hygiene in the school of the Royal College of Surgeons. In London, instruction in Sanitary Science is also given in the Parkes Museum of Hygiene, Margaret Street.

PRACTICAL PHYSIOLOGY AND HISTOLOGY.—This subject is taught in all the schools: but more elaborate provision is made in some cases than in others.

At *St. Bartholomew's Hospital*, the course is conducted by a demonstrator and two assistant demonstrators under the superintendence of the lecturers on Physiology and Chemistry. Dr. Klein gives a course of lectures on General Histology, with demonstrations, which form part of the course on General Anatomy and Physiology.

At *Guy's Hospital*, Mr. Golding-Bird gives a course of Histological demonstrations of the elementary tissues and the chief organs of the body, with their behaviour and re-agents, as studied with the microscope. The course includes about thirty-five demonstrations, and is gone through twice in the winter session. A laboratory class in Practical Physiology, intended for advanced students, is held by Dr. Wooldridge in the summer.

At *University College*, an elaborate course of instruction in Practical Physiology is given by Mr. Schäfer (Jodrell Professor of Physiology), and assistants. Practical instruction in Zoology and Comparative Anatomy is also given by the professor, Mr. Ray Lankester, and his assistants. For the details, we must refer our readers to the prospectus of the Medical Faculty, and also to that of the Faculty of Science, of the College.

At the *Westminster Hospital*, a course of lectures and demonstrations on Histology and Practical Physiology is given by Dr. Heneage Gibbes.

In *Owens College, Manchester*, a very complete course of practical Physiology is conducted during the year by Dr. Arthur Gamgee, the Brackenbury Professor of Physiology. The class meets for systematic work in Practical Histology and Physiological Chemistry, and for demonstrations in Experimental Physiology. The Physiological Laboratory is open daily during the winter and summer sessions.

Courses of Practical Biology and Practical Physiology are also given in the Mason Science College in Birmingham, and in University College, Liverpool; and arrangements are being made for similar instruction in the Yorkshire College at Leeds.

Practical Physiology is taught in the University of Edinburgh, by Professor Rutherford; in that of Aberdeen, by Professor Stirling; and in that of Glasgow, by Professor Fleming. Courses are also given in the Edinburgh Extra-academical School; and in the Royal Infirmary School of Medicine, in Anderson's College, and in the Western Medical School, in Glasgow.

HOSPITAL APPOINTMENTS.—Numerous appointments at the hospitals are open to the diligent student, without payment (except in the few cases hereinafter noticed) of any fee. For the resident appointments, a qualification to practise is required; and, in some instances, a salary is paid in addition to the provision of rooms and board.

At *St. Bartholomew's Hospital*, four house-physicians and ten house-surgeons are appointed annually. A resident midwifery assistant is appointed every six months; an ophthalmic house-surgeon is also appointed for six months, and may be re-elected. A senior and a junior assistant-chloroformist are appointed annually. Each of these officers is provided with rooms by the hospital authorities. The senior assistant-chloroformist receives £50 a year; each of the others has an annual salary of £25. Clinical clerks to the medical in-patients, and to the physician-accoucheur, also clerks and dressers for the out-patient and special departments, are chosen from among the students. Forty dressers for the surgical in-patients and the surgical casualty department are selected each year; and other in-patient dresserships may be obtained on payment of £10 10*s.* for three months, or £16 16*s.* for six months.

At *Charing Cross Hospital*, a medical and a surgical registrar are appointed, each with a salary of £40 a year. Two house-physicians, two house-surgeons, and a resident obstetric officer are appointed every six months, after examination. The clinical clerks—three to each physician, and two to each assistant-physician, and the dressers—three to each surgeon and assistant-surgeon, and also two clinical clerks to the physician-accoucheur, are ap-

pointed for periods of four months. Each student must act as in-patient clerk and dresser. Pathological assistants, who assist at the *post mortem* examinations, are appointed each month for four months.

At *St. George's Hospital*, house-physicians and house-surgeons are appointed half-yearly from among the perpetual pupils. The appointments are held for twelve months, with board and residence in the hospital, free of expense. Each pays a deposit of 50 guineas, which is returned if the duties of his office have been satisfactorily performed. A curator of the Pathological Museum, and a medical and a surgical registrar, each with a salary of £50; an ophthalmic registrar and a microscopic pathologist, each with a salary of £25; and an obstetric assistant, with board, residence, and a salary of £100, are appointed annually. An assistant-house-physician, an assistant house surgeon, an ophthalmic assistant, two assistant medical registrars, and an assistant surgical registrar, are appointed every six months. Clinical clerks and dressers are also appointed.

At *Guy's Hospital*, there are appointed during the year 6 senior and 6 junior house-physicians, 6 senior and 6 junior house-surgeons, 12 senior and 12 junior obstetric residents, 24 surgeons' dressers, 18 clinical assistants, 24 dressers in the eye wards, 24 *post mortem* clerks, 24 obstetric out-patient clerks, 36 assistant physicians' clerks, 12 dental surgeons' dressers, 12 aural surgeons' dressers, 64 medical clinical clerks, 72 or more assistant-surgeons' dressers and dressers in the surgery, 12 obstetric ward clerks, 80 surgical clinical clerks, 32 assistant-surgeons' clerks, 60 extern obstetric assistants, and clerks in the room for applying electricity. All students have opportunities of becoming clinical ward clerks to the physicians and surgeons, as well as dressers to the assistant-surgeons, and dressers in the surgery; and the diligence with which they perform the duties of these offices is an important test of their fitness for the higher posts.

At *King's College Hospital*, a physician's assistant, house-surgeons, a physician-accoucheur's assistant, clinical clerks, and dressers, are chosen by examination from matriculated students of the College who are pupils at the hospital.

At the *London Hospital*, every student is expected to act as clinical clerk to the medical out-patients for six weeks in his second year, and to dress for three months in the surgical out-patient department; also to act as *post mortem* clerk for three months. The following appointments are also made: five house-physicians (qualified for registration) every six months; clinical clerks (open to all full pupils) every three months; a resident accoucheur (qualified) every six months; clinical obstetric clerks every three months in the in-patient, and every six weeks in the out-patient department; five house-surgeons, for six months (each being provided with board and residence); surgical dressers every three months; three clinical assistants (each with a salary at the rate of £80 *per annum*); a medical and a surgical registrar (each with £100 *per annum*); a dental assistant, ophthalmic and aural dressers, and *post mortem* clerks.

At *St. Mary's Hospital*, four resident medical officers are appointed for twelve months, and a resident obstetric officer for six months. They all reside in the hospital, free of expense. All students are required to perform the duties of clinical clerk and dresser for eight months after passing the primary examination, after having acted as dressers in the casualty and electrical departments.

At the *Middlesex Hospital*, two house-surgeons, six resident physicians' assistants, and a resident obstetric physician's assistant, are appointed by competitive examination. They pay, on appointment, fees varying from ten to twenty guineas, according to circumstances. The appointments of clinical clerks and dressers are so arranged that every student may, at some period of his attendance on hospital practice, hold both a clerkship and a dressership. Obstetric physician's clerks and ophthalmic dressers are appointed.

At *St. Thomas's Hospital*, two resident and one non-resident house-physician, an assistant house-physician, two house-surgeons, an assistant house-surgeon, and a resident accoucheur, are selected every three months from gentlemen who have obtained professional diplomas. An ophthalmic clinical assistant is also appointed with a salary of £50 per annum for six months. Clinical clerks and dressers to in-patients are selected from pupils, to the number in all of at least 100 each year; and clinical clerks and dressers to out-patients to the number of 80 or 100 each year. Two registrars, at an annual salary of £100 each, are appointed each year. There are also numerous minor appointments of anatomical assistants, prosectors, obstetric clerk, &c., open to all students.

In *University College Hospital*, eight house-physicians, six house-surgeons, and four obstetric assistants, are selected annually by examination from among the senior students. They reside in the hospital, paying for their board. Out-patient physicians, and surgeons' assistants, clinical clerks, surgeons' dressers, and ophthalmic surgeons' assistants, are selected from among the pupils who are also students of the College.

At the *Westminster Hospital*, a curator of the museum, and pathologist, with a salary of £52 10*s*., and a medical and a surgical registrar, each with a salary of £40, are appointed annually. Two house-physicians, a house-surgeon, and a resident obstetric assistant, are appointed by examination for six months; they are provided with board and rooms in the hospital, and the senior house-physician, as chloroformist, receives an additional honorarium of £21. An assistant house-surgeon is appointed by examination. Clinical assistants to the assistant-physicians and assistant-surgeons, and to the officers in charge of special departments are appointed from among the most advanced students of the fourth year. Every student must act as out-patient dresser during three months in his first year, and afterwards hold the office of in-patient dresser and clinical clerk during a period of three months each.

In the *Birmingham General Hospital*, a resident medical and a resident surgical assistant, and two resident dressers, are appointed, each for six months.

At the *Queen's Hospital, Birmingham*, a resident obstetric assistant is appointed every six months, and a resident dresser every three months.

At the *Bristol Royal Infirmary*, students are appointed to clinical clerkships in their third and fourth years. Surgeons' dressers are appointed after the first year of study, and, when sufficiently qualified, reside in the hospital in weekly rotation, and act under the supervision of the house-surgeon. The dressers and clinical clerks pay fees in addition to those for hospital practice; the former £5 5*s*. for each six months, the latter £5 5*s*. for six months, or

£8 8*s.* for a year. Obstetric clerks pay £3 3*s.* for three months. A pathological clerk is appointed every four months.

At the *Bristol General Hospital*, clinical clerks, dressers, and obstetric clerks are appointed. The clinical clerks and dressers pay each an extra fee of £5 5*s.* for six months; and the obstetric clerks £3 3*s.* for three months. The dressers reside in the hospital in rotation, free of expense.

In the *Leeds General Infirmary*, all students must hold the office of clinical clerk and dresser. A house-physician and house-surgeon are elected from time to time. There are four resident assistants; two are elected every six months, and hold office for one year.

At the *Liverpool Royal Infirmary*, two house-physicians and three house-surgeons are selected (by competitive examination if necessary) from pupils of the school who have obtained a legal qualification to practise; they hold office for six months. Three clinical clerks are appointed to each physician, and three or more dressers to each surgeon, and two clerks to the wards for special diseases of women; they hold office for three months. *Post mortem* clerks are appointed for periods of six weeks. This appointment is required to be held by every student.

At the *Manchester Royal Infirmary*, a registrar, a pathological registrar, and two assistant medical officers, are appointed annually, each with a salary of £100. The following resident medical officers are appointed: at Infirmary, for two years, salary £250 *per annum*; at Cheadle Lunatic Asylum, for one year, £150 *per annum*; at Monsall Fever Hospital, for one year, £200 *per annum*. A resident surgical officer is appointed annually, and receives £150. Eight house-surgeons, and four house-physicians are appointed in each year. An assistant to the resident medical officer at Monsall, and one at Cheadle, are appointed every six months. House-surgeons must possess registrable qualifications. Two or more clinical clerks are attached to each physician and assistant-physician, and two or more dressers to each surgeon and assistant-surgeon: two clerks are also appointed to the pathological registrar and to each of the assistant medical officers. They hold these for three months. Accident-room dressers are also appointed monthly, for two months.

In the *Newcastle-on-Tyne Infirmary*, four times in the year, two resident medical assistants, two resident surgical assistants, three non-resident clinical clerks, and sixteen dressers, are appointed for three months. Assistants in the pathological department and to the dental surgeon are also appointed.

In the *Edinburgh Royal Infirmary*, resident physicians and resident surgeons are appointed for six months. Clinical clerks are also appointed; and each surgeon appoints several dressers for six months. There are also assistants in the pathological department.

In the *Glasgow Royal Infirmary*, five physicians' and five surgeons' assistants are boarded and lodged in the Hospital at the rate of £25 *per annum*. The appointments can be held for twelve months, six in the medical and six in the surgical wards. These appointments are open to students who have passed all their examinations except the last, or to qualified gentlemen. There are also numerous clerkships and dresserships.

TUTORIAL INSTRUCTION.—In addition to the ordinary courses of lectures and hospital practice, and practical instruction, many of the medical schools have an officer whose special duty it is to direct the pupils in their studies, and to hold classes for the guidance of those who are about to present themselves for examination before the licensing boards.

SCHOLARSHIPS, EXHIBITIONS, AND PRIZES.—In addition to the rewards for diligence in professional study, many of the medical schools offer yearly one or more scholarships, usually in general literature, and in some instances in science. The competition is open to gentlemen about to commence their hospital studies; and the successful candidate is expected to enter as a pupil of the school in which the examination has been passed. In the examination in general literature, the subjects are usually those of preliminary education as defined by the General Medical Council, or of the Matriculation Examination of the University of London. In the Science scholarships, the usual subjects are Chemistry, Botany, and Zoology. The yearly value of the scholarships and exhibitions varies from £100 to £10.

There are also many scholarships and exhibitions, varying in value from £100 to £20, open to students during their period of professional study, or (as at St. George's Hospital) within a limited time after they have passed their final examinations for licences to practise. These exhibitions are in some cases (as at St. Bartholomew's and the London Hospitals) awarded after examination in subjects of preliminary education; but in most of the schools they are given after examination in groups of subjects of professional education, elementary or practical.

Special rewards are also offered in many of the schools for evidence of proficiency in clinical observation.

For further information respecting the scholarships and exhibitions, and regarding the class prizes, as well as for many details which we are obliged to omit, our readers must consult the prospectuses of the schools and our advertising columns.

FRANCE.

GRADUATION IN MEDICINE.

THE Degree of Doctor in Medicine in the University of France is conferred by the Faculties of Paris, Montpellier, Nancy, Bordeaux, Lille, and Lyons, under regulations laid down by the Government.

1. The studies necessary for obtaining the degree last five years; during the first three years they may be carried on either in the Faculties, in the *Écoles de plein exercice*, or in the preparatory schools of medicine and pharmacy. The studies of the fourth year can only be made in a Faculty or in an *École de plein exercice*.

2. Candidates must produce, when they take the first inscription, the diploma of Bachelor of Sciences, limited as regards the mathematical part. They must undergo five examinations and defend a thesis. The second, third, and fifth examinations are each divided into two parts.

3. The five examinations are as follows. *First Examination:* Physics, chemistry, medical natural history. *Second Examination:* First part, dissection; second part, anatomy and histology; third

part, physiology. *Third Examination:* First part, practical surgery (ligature and amputation on the subject); second part (all) external pathology, midwifery, operative surgery; third part, internal pathology (medicine), general pathology. *Fourth Examination:* Hygiene, legal medicine, therapeutics, materia medica, and pharmacology. *Fifth Examination:* First part, clinical surgery and obstetrics; second part, clinical medicine, practical demonstrations in pathological anatomy; and a thesis on a subject chosen by the candidate.

4. The first examination takes place after the fourth inscription and before the fifth; the first part of the second examination, after the tenth inscription, and before the twelfth; and in the second part after the twelfth inscription and before the fourteenth. The third examination cannot be passed until the end of the fourth year (after the sixteenth inscription). Any candidate who does not pass the first examination in January, at the latest, will be put back to the end of the scholastic year, and will not be permitted to take out any inscription during the course of that year.

5. Candidates for the doctorate, pupils of *écoles de plein exercice* or of the preparatory schools are examined by the Faculties at the periods fixed in the preceding article. They may, however, defer the first examination until after the twelfth inscription. In that case they must pass the second examination before the thirteenth inscription, and, from the commencement of the second year of study, are subjected to interrogations at the end of each six months, the results of which are transmitted to the Faculties, to be taken into account in the examinations for the doctorate.

6. The inscriptions for *officier de santé* cannot be converted into inscriptions for the doctorate, in the case of pupils actually studying; but this conversion may be permitted in the case of *officiers de santé* who have practised medicine for at least two years.

7. Practical work in the laboratory and dissection are obligatory. Each annual period of laboratory work and dissection comprises a six months' course, or *semestre*. Attendance on hospital practice is compulsory from the end of the second to the end of the fourth year.

8. The fees to be paid by candidates for the degree of Doctor in Medicine are fixed as follows:—First year, 60 *francs*; second and third years, 40 *francs* each year; fourth year, 20 *francs*. These include all the practical work. Each year 10 *francs* for the library; for each examination 55 *francs*, 25 *francs* being returned in case of rejection; thesis, 240 *francs*. At the second and third examinations (consisting of three parts) two fees are paid for each.

9. Every candidate, who, without an excuse admitted by the jury, does not answer when his name is called, on the day of which notice has been given to him, is set back for three months, and forfeits the fees which he has paid.

10. The fees paid by the pupils of the Faculties go to the public treasury. The fees paid for inscriptions and for practical work by the pupils of the *écoles de pleine exercice* and the preparatory schools go to the municipal treasuries.

MEDICAL EDUCATION.

Medical Education in France is under the control of the State, and is given in the Faculties of Medicine and Pharmacy, the Écoles de Plein Exercice, and the Preparatory Schools of Medicine and Pharmacy.

The Faculties are six in number: five—those of Paris, Montpellier, Nancy, Lille, and Lyons—are schools of Medicine; the other, at Bordeaux, is a mixed Faculty of Medicine and Pharmacy. They confer, besides the same diplomas and certificates as the other schools, the diplomas of doctor in medicine and *pharmacien* and midwife of the first class.

There are two *écoles de plein exercice*—viz., at Nantes and at Marseilles. They are entitled to give the same certificates as the preparatory schools, but candidates for the doctorate may take out sixteen inscriptions in them.

The Preparatory Schools are entitled to give diplomas or certificates of *Officier de Santé* and *Pharmacien*, herbalist, or midwife, of the second class. Candidates for the doctorate can study in them three years, and take out twelve inscriptions. There are preparatory schools at Algiers, Amiens, Angers, Arras, Besançon, Caen, Clermont Ferrand, Dijon, Grenoble, Limoges, Poitiers, Reims, Rennes, Rouen, Toulouse, and Tours.

Faculty of Medicine in Paris.

The School of Medicine in Paris is open to all who wish to attend the courses and take degrees. Great facilities are afforded to British and foreign students for the prosecution of their studies, all lectures being given gratuitously, and no payment being required for hospital attendance. For dissections, however, a payment of 40 *francs* is expected from each student.

The medical sessions begin for winter on October 15th, and for summer on April 15th of each year.

The instruction in the Faculty of Medicine in Paris is given by the following professors: M. Sappey, Anatomy; M. Robin, Histology; M. Béclard, Physiology; M. A. Gautier, Medical Chemistry; M. Baillon, Natural History; M. Gavarret and M. Gariel (*agrégé*), Medical Physics; M. Regnault, Pharmacology; M. Peter, M. Dieulafoy, and M. Damaschino, Internal Pathology or Medicine; M. Trélat and M. Berger (*agrégé*), External Pathology or Surgery; M. Guyon and M. Duplay, Surgical Pathology; M. Lannelongue, Practical Surgery; M. Hayem, Materia Medica and Therapeutics; M. Cornil, Pathological Anatomy; M. Laboulbène, History of Medicine; M. Pajot, Midwifery; M. Bouchardat, Hygiene; M. Brouardel, Forensic Medicine; M. Vulpian, Comparative and Experimental Pathology; MM. G. Sée, Hardy, Potain, Jaccoud, Clinical Medicine; MM. Gosselin, Richet, Verneuil, Trélat, Le Fort, Clinical Surgery; M. Tarnier, Clinical Midwifery; M. Charcot, Diseases of the Nervous System; M. Panas, Clinical Ophthalmology; M. Ball, Mental Pathology and Diseases of the Brain; M. Fournier, Diseases of the Skin and Venereal Diseases.

Auxiliary courses are given by *agrégé* professors.

Practical instruction is obligatory on all students up to the end of the fourth year. It is given under the guidance of the following *chefs des travaux*; M. Farabeuf, Anatomy; M. Faguet, Natural History; M. A. Gautier, Medical Chemistry; M. Guebhard, Medical Physics; M. Gombault, Pathological Anatomy.

The Faculty of Medicine possesses laboratories for Anatomy (Professor Sappey), Operative Surgery (Professor Le Fort), Physics (Professor Gavarret), Chemistry (Professor Gautier), Biological Chemistry

(Professor Gautier), Practical Forensic Medicine (Professor Brouardel), Botany (Professor Baillon), and Teratology (Director, M. Dareste), Normal Histology (Director, M. Ch. Robin), Physiology (Professor Béclard), Experimental and Comparative Pathology (Professor Vulpian), Therapeutics (Professor Hayem), Pharmacology (Professor Regnault). There are also laboratories for practical instruction at several of the hospitals.

The course of study to be followed in each winter session is as follows. *First year:* Medical Chemistry, Physics, and Natural History—theoretical and practical. *Second year:* Anatomy, Histology, Physiology, Medicine, and Surgery, with practical instruction in Anatomy, Histology, and Physiology. *Third year:* Anatomy, Histology, Pathological Anatomy, Physiology, Medicine, Surgery, Operative Surgery, Materia Medica and Therapeutics, Pharmacology, and Medical and Surgical hospital practice; practical work in hospital, Anatomy, Histology, and Physiology. *Fourth year:* Medicine, Surgery, Pathological Anatomy, general Pathology, and Therapeutics, Experimental Pathology, Practical Surgery, Hygiene, Forensic Medicine, History of Medicine and Surgery, and Medical, Surgical, Obstetric, and special hospital practice, with Practical instruction in Hospital work, Operative Surgery, and Pathological Anatomy.

Attached to the Faculty of Medicine are the Botanical Gardens and Museum of Natural History; the Orfila Museum of Anatomy and Zoology, at the École de Médecine; the Dupuytren Museum of Pathological Anatomy, in the École Pratique; and the Library.

The prizes of the Faculty of Medicine are the following. The Corvisart prize, a gold medal of the value of 400 *francs* (£16) is offered for competition to all pupils of the Faculty who have also entered to one of the internal clinics. The subject is some question in medicine, the answer to which must be derived exclusively from the facts observed in hospital practice. The Montyon prize, consisting of 700 *francs* (£28), is awarded to the author of the best essay on the prevalent diseases of the preceding year, their characters, symptoms, and treatment. The Barbier prize of 2,000 *francs* (£80) is offered annually to the inventor of an operation, or of instruments, bandages, &c., of general utility, and superior to anything of the kind that has been already in use. The Chateauvillard prize, also of 2,000 *francs*, is awarded yearly to the author of the best work on the medical sciences, printed between January 1 and December 31 of the preceding year. The works sent for competition must be in French. Graduation theses are admitted. An annual sum of 1,000 *francs* (£40) is awarded, under the will of the late Baron de Trémont, to a meritorious but poor student. An annual revenue of 3,000 *francs*, bequeathed by Madame de Barkow, is applied to a similar purpose in the superior educational establishments in Paris. The Lacaze prize of 10,000 *francs* (£400) is offered biennially for the best essay on phthisis or on typhoid fever—the subjects being taken alternately. After the examination of the theses, the Faculty names to the Minister of Public Instruction the candidates worthy of special distinction, in the form of silver medals, bronze medals, and honourable mention. Students' bursaries of the value of 1,200 *francs* are awarded after competition. Each bursary is tenable for one year; and the holder, if desirous of its renewal, must again compete. Candidates must be natives of France, at least eighteen years of age. Travelling bursaries are also awarded.

The College of France.

In this institution, the following courses of instruction on sciences allied to medicine are given, viz., Experimental Medicine, by Dr. Brown-Séquard; General Anatomy, by M. Ranvier; Natural History of Organised Bodies, by M. Marey; Comparative Embryogeny, by M. Balbiani; Organic Chemistry, by M. Berthelot; Mineral Chemistry, by M. Schutzenberger. The Histological Laboratory is under the direction of M. Ranvier and M. Malassez, and is specially intended for the use of persons desirous of making original researches. The Physiological Laboratory, directed by Professor Marey and M. François-Franck, is open to persons who enter their names for the purpose with the secretary of the Faculty of Sciences, and who have a sufficient knowledge of physiology to enable them to undertake experimental research. The researches may have reference to any department of physiology; but special attention is paid in this laboratory to the phenomena of circulation and motion, and their registration by suitable apparatus.

Free Medical Instruction.

In addition to the professors in the Faculty of Medicine, there are a number of lecturers whose instruction is recognised.

The Hospitals of Paris.

Pupils of the Faculty of Medicine in Paris attend, without payment, the practice of any of the hospitals which they may select. The visits of the physicians and surgeons are generally made at an early hour—8 or 9 A.M. The following is a list of these institutions:

Hôtel Dieu, Parvis Nôtre Dame.—559 beds. *Physicians:* Drs. G. Sée, Hérard, Moutard-Martin, Empis, Gallard, and Vulpian. *Surgeons:* MM. Richet, Le Fort, and Panas. The hospital possesses laboratories for histology, chemistry, and physiology; also a library for the use of the *internes*

Hôpital de la Charité, 47 Rue Jacob.—504 beds. *Physicians:* Drs. Hardy, Laboulbène, Desnos, Bernutz (Obstetric), Peter, and Féréol; *Surgeons:* MM. Gosselin and Desprès. The library of this hospital contains a large number of works in anatomy, physiology, medicine, and surgery, including numerous theses.

Hôpital de la Pitié, 1 Rue Lacépède.—719 beds. *Physicians:* Drs. Lancereaux, Dumontpallier, Jaccoud, Brouardel, Cornil, and Audhoui; *Surgeons:* MM. Verneuil and Polaillon.

Hôpital Lariboisière, 2 Rue Ambroise Paré.—706 beds. *Physicians:* Drs. Bouchard, C. Paul, Proust, Siredey, and Duguet; *Surgeons:* MM. Duplay (Diseases of the Eye) and B. Anger. *Obstetric Physician:* M. Pinard. Besides the ordinary clinical instruction, instruction is also given in ophthalmic surgery and diseases of the larynx.

Hôpital Saint-Antoine, 184 Faubourg Saint-Antoine.—621 beds. *Physicians:* Drs. Mesnet, Dujardin-Beaumetz, Hayem, Dieulafoy, Hallopeau, Sevestre, and Gourand; *Surgeons:* MM. Périer and Delens.

Hôpital Necker, 151 Rue de Sèvres.—418 beds. *Physicians:* Drs. Potain, Blachez, Rigal, and Grancher; *Surgeons:* MM. Trélat and Petit. The Civiale museum, containing numerous calculi and

specimens of diseases of the urinary organs, is attached to the hospital.

Hôpital Beaujon, 208 Faubourg Saint-Honoré.—422 beds. *Physicians:* Drs. Millard, Guyot, Gombault, and Fernet; *Surgeons:* MM. Tillaux and Léon Labbé. The hospital possesses a library containing 1,500 volumes, and a large number of theses.

Hôpital Cochin, 17 Faubourg Saint-Jacques.—249 beds. *Physician:* Dr. Bucquoy; *Surgeon:* M. Th. Anger; *Obstetric Surgeon:* M. Marchand. An obstetric department is attached to this hospital; but only a limited number of students are admitted to the morning visit.

Hôpital Laennec, 42 Rue de Sèvres.—628 beds. *Physicians:* Drs. Ball, Damaschino, Ferrand, and Legroux; *Surgeon:* M. Nicaise.

Hôpital Bichat, Boulevard Ney.—200 beds. *Physicians:* Drs. Gérin-Roze and Gouguenheim; *Surgeon:* M. Terrier.

Hospice de la Salpêtrière, Boulevard de l'Hôpital.—3,821 beds for old persons, and 720 for female lunatics. *Physicians:* Drs. Charcot and Luys; *Surgeon:* M. Terrillon; *Physicians to the Lunatic Department:* Drs. Legrand du Saulle, Moreau, and A. Voisin. *Assistant Physician:* Dr. Charpentrès. There is a medical library, founded and supported by the *internes*; it contains more than 1,500 volumes. M. Charcot, one of the physicians, gives a course of instruction on diseases of the nervous system; and MM. Luys and Voisin give courses of mental pathology.

Hospice de Bicêtre.—1,834 beds for old persons, and 773 for male lunatics and epileptics (the latter number includes nearly 200 epileptics and backward children). *Physician:* Dr. Debove; *Surgeon:* M. Berger; *Physicians to the Lunatic Department:* Drs. Falret, J. Voisin, and Bourneville; *Assistant-Physician:* M. Deny. The library, which was founded in 1865, contains about 2,000 volumes.

Hôpital des Enfants Malades, 149 Rue de Sèvres.—562 beds. *Physicians:* Drs. Bouchut, Labric, Simon, and Descroizelles; *Surgeon:* M. de Saint-Germain. There are wards for acute and chronic diseases, small-pox, and diseases of the eye.

Hôpital Trousseau, 89 Rue de Charenton.—427 beds. *Physicians:* Drs. Triboulet, D'Heilly, Cadet de Gassicourt: *Surgeon:* M. Lannelongue.

Hôpital Saint-Louis, 40 Rue Bichat.—843 beds; of which 583 are occupied with cases of skin-disease, 28 with obstetric cases, and the rest with surgical cases. *Physicians:* Drs. Lailler, Vidal, Guibout, Fournier, and Ollivier; *Surgeons:* MM. Péan and Le Dentu; *Accoucheur:* M. Porak. General medicine is not taught in this hospital, but there are ample means for the special study of diseases of the skin, on which courses of theoretical and practical lectures are delivered. A museum containing several hundred models and drawings, illustrating diseases of the skin; to which is added M. Fournier's collection of illustrations of venereal diseases. The hospital is also rich in surgical cases.

Hôpital du Midi, 111 Boulevard du Port-Royal.—336 beds, devoted exclusively to the reception of cases of venereal disease. *Physicians:* Drs. Simonet and Mauriac; *Surgeon:* M. Horteloup.

Hôpital de Lourcine, 111 Rue de Lourcine.—243 beds. *Physicians:* Drs. Martineau and Hutinel; *Surgeon:* M. Pozzi. Students are admitted to the hospital by special ticket.

Hôpital Tenon, Rue de la Chine.—825 beds. Besides these, 190 beds can be added in cases of epidemics, &c. *Physicians:* Drs. Straus, Rendu, Huchard, Tenneson, Landouzy, and Rathery. *Surgeons:* MM. J. Lucas-Championnière and Gillette. *Accoucheur:* M. Ribemont.

Maison d'Accouchement, 121 Boulevard du Port-Royal.—316 beds. *Physician:* Dr. Hervieux; *Surgeon:* M. Tarnier; *Assistant-Surgeon:* M. Marchand. The hospital is employed exclusively for the education of midwives, and is not open to students of medicine. Attached to the hospital is a school for midwives.

Clinique d'Accouchement, 89 Rue d'Assas. *Surgeon:* M. Pajot.

Hospital Appointments in Paris: Concours.

The medical staff of each hospital in Paris consists of—1. Physicians and Surgeons; 2. Prosectors; 3. *Internes* and *Externes* in Medicine and in Surgery; 4. *Pharmaciens;* 5. *Internes* in Pharmacy.

All the appointments in the hospitals of Paris are obtained by *concours;* and, when vacant, are eagerly competed for.

Each medical service is under the direction of a physician, and comprises also an *interne* and three or four *externes*. The organisation of the surgical departments is similar; but the number of pupils is greater and there are generally two or three *internes* and five or six *externes*.

The physicians retire from hospital duty at the age of 65, and the surgeons at 63. When first nominated, they have to attend the consultations at the central bureau, and to do duty for any of the hospital physicians and surgeons that may be absent. As vacancies occur in the hospitals, they receive appointments in the order of their nomination.

The *internes* receive 600 *francs* for the first year, 700 *francs* the second year, 800 *francs* the third year, and 1,000 *francs* the fourth year. Some of them are also provided with lodging, fire, and light; others receive 400 *francs* yearly in lieu of lodging.

The *interne* is the most direct assistant of the hospital physician or surgeon; he accompanies him in his morning visit, and himself visits the patients in the evening. The *internes* remain on duty in turn to attend to urgent accidents and cases of illness.

In November, the *internes* are invited to compete for prizes. To those of the first and second years are offered a silver medal, books, and two certificates of honour. Those of the third and fourth years compete for a gold medal, a silver medal, and two certificates of honour. The successful candidate for the gold medal is entitled to two additional years of *internat.*

Those candidates who are placed in the first list at the *concours*, but do not succeed in getting appointments, are termed provisional *internes*, and fill the places of those who are absent. They have, however, to compete again at the end of the year, if they desire to receive appointments.

The *externes*, who are appointed for three years, have to take records of cases, either alone or under the direction of the *internes*, to assist the latter in dressing difficult cases, and to dress the minor cases. The *externes* at the central hospitals (Charité, Clinique Hôtel Dieu, and Pitié) are not paid; at those more distant from the centre of the city (Necker, Cochin, les Enfants Malades, &c.), they receive 300 *francs* yearly; at others more distant (Beaujon, Lariboisière, Saint-Antoine, Trousseau, Saint-Louis), 365 *francs* yearly; at the Maison de Santé, 300 *francs* yearly, and 300 *francs* for expenses;

at the Tenon Hospital, in consideration of the distance, 50 *francs* monthly.

The *concours* for the *externat* generally takes place in October. Candidates must not be under 18, nor above 26 years of age. They must produce 1. A register of birth ; 2. A certificate of re-vaccination ; 3. A certificate of good conduct signed by the mayor of the commune in which the candidate is domiciled ; 4. A certificate of at least one inscription in a Faculty of Medicine. The examination consists in 1. An oral description of some subject in descriptive anatomy ; 2. A similar description of some elementary subject in pathology or minor surgery. For each five minutes are allowed, after five minutes of reflection. The maximum number of marks that can be gained by a candidate is 20 for each examination. The examination is conducted by four physicians and three surgeons of the central bureau, generally from those most recently appointed.

The *concours* for the *internat* takes place nearly at the same time as that for the *externat*. Candidates must not be more than 28 years old, and must produce certificate of having performed the duties of *externe*, at least from the first day of the preceding January, without interruption (unless this have been unavoidable) ; also certificates from the physicians and surgeons and the directors of the hospitals in which they have performed the duties of *externe*, testifying to their punctuality, obedience, and good conduct. The examination commences with a written essay on some subject in anatomy and medical or surgical pathology, for which two hours are allowed. This is followed by an oral examination in the same subjects ; ten minutes being allowed for each answer after ten minutes of consideration. The maximum of marks obtainable for the written examination is 30 ; for the oral 20. After this the candidates are classified.

At the end of the *concours*, the candidates are classified according to the number of marks ; and the 35 or 40 first on the list are nominated *internes*.

The first four candidates on the list are the successful candidates for the price for *externes*, the examination for which is the same as that for the *internat*. The first receives a case of instruments of the value of 300 *francs*, and has during his first year the sum of 800 *francs* in addition to the payment which he receives in common with the other *internes*. The first and second candidates are also presented with books.

The prizes offered to the *internes* are competed for in the beginning of November. The examination consists in—1. A written composition, for which two hours are allowed, bearing on anatomy, physiology, and pathology ; 2. An oral description of some subject in external pathology ; 3. A similar description of some subject in internal pathology (for each of these ten minutes are allowed) ; 4. *Internes* of the third and fourth years must also have sent in before August 15, an original essay on some subject selected by them. This is generally based on observations made in the hospital.

The Civiale Prize, of the value of 1,000 *francs*, is given every second year to the best essay by an *interne* on duty on some point in the pathology of the genito-urinary passages.

The *concours* at the Bureau Central for the office of physician consists of five examinations. 1. The candidate gives a lecture for a quarter of an hour on a patient, for whose examination ten minutes are allowed. 2. A lecture of twenty minutes' duration, after twenty minutes' reflection, on some subject in medicine. 3. A written consultation on a medical case ; ten minutes being allowed for examining the patient, and three-fourths of an hour for writing out the consultation. To each of these examinations a maximum of twenty marks is allotted. During these three examinations a process of elimination takes place, so that at last there remain five candidates for one place, eight for two, and ten for three places. These are then further subjected to the following tests : 1. A written composition for which three hours are allowed on some subject in medicine, which must comprise a question in pathological anatomy ; 2. A lecture of thirty minutes' duration on two patients, twenty minutes being allowed for examining them.

In the *concours* for the office of surgeon the examinations are nearly the same ; there is, in addition, an examination in operative surgery, and the candidate has to lecture on one subject instead of two.

GERMANY.

GRADUATION IN MEDICINE.

IN the German Empire there are twenty Universities which possess a Medical Faculty and grant degrees in Medicine ; viz., those of Berlin, Bonn, Breslau, Erlangen, Freiburg im Breisgau, Giessen, Göttingen, Greifswald, Halle, Heidelberg, Jena, Kiel, Königsberg, Leipzig, Marburg, Munich, Rostock, Strasburg, Tübingen, and Würzburg.

No one can legally practise Medicine in this empire unless he have passed the Staats-Examen Board. The law forbids any one to call himself *Arzt* (Physician) unless he have passed the State Board ; or Doctor, unless he have passed the examinations at some University, and thereby acquired the degree. The Doctor who has not passed the State Board is not a licensed physician, and may hold no appointment ; and if he practise, he has no right or power to insist on payment of his services. The practitioner who is neither doctor nor physician, if any mishap occur from his ignorance, is punished not only by fine, but by imprisonment for a period varying from six months to ten years.

The expenses of passing the State Board are less than half of those for the Faculty of an University, and the examination is more exclusively practical ; hence it is selected by the poorer students who seek only a rural practice. The majority of students pass both the University and State examinations, and this is especially necessary for those who aspire to any medical office.

No medical diploma, either from an University or otherwise, can be obtained in Germany without a certificate of general education, to obtain which an examination must be passed at a German gymnasion (public school) in Greek, Latin, at least one Modern Language besides German, Logic, the Physical Sciences, and Mathematics. A candidate who cannot present this, or an equivalent certificate, must pass a preliminary examination in those subjects.

The number and character of professorial chairs in the Medical Faculties vary greatly in the different Universities ; but in all there are three classes of teachers, viz., professors, extraordinary or assistant professors, and *privat-docents*.

The professors are appointed for life, and at the

end of thirty years' service can retire on a pension; they receive a fixed salary from the State or University, a part of the revenue derived by the medical faculty from certain fees, and their lecture fees from the students. The fixed salary is occasionally increased, according to the success and reputation of the professor. Any doctor in medicine may be a candidate for a vacant chair, the selection being made by the Minister of Public Instruction from a list of names recommended by the Faculty.

The extraordinary or assistant professors are appointed in like manner from among the *privat-docents*. As a rule, their compensation comes only from students' fees, but occasionally a small fixed salary is allowed.

There are no independent schools in Germany. There is, however, little objection to free teaching, and hence young men of ability can establish themselves as private teachers, demonstrators, &c., in the immediate vicinity of the Universities, relying on their own talents and tact to secure pupils. These are the *privat-docents*, much of whose teaching consists in giving short courses, of from six to eight weeks' duration, on special subjects. The position of *privat-docent* is accessible to all doctors of medicine, and the number is unlimited. Their compensation is from students' fees, and they may not underbid the regular professor. At some Universities they are furnished with rooms, and given a share of the clinics; at others, they receive little or no assistance. The *privat-docents* are understood to be in training for professorships; and, if they show marked ability as teachers or as investigators, their promotion may be very rapid.

The course of study at the German Universities varies according to the requirements for the particular medical degree, but in no case is it less than three years. At some, the course extends over four years. The following lectures are the least which will be accepted by any of the University Faculties, and may be taken in whatever order the student may wish. The courses occupy nine-and-a-half months in each year. For one year: Chemistry, six hours weekly; Physics, four hours weekly; Zoology and Comparative Anatomy, three hours weekly; Botany, three hours weekly; Mineralogy and Geology, two hours weekly; Anatomy, Histology, and Preparation of Specimens, ten hours weekly; Physiology and Laboratory Work, eight hours weekly; General Pathology, Pathological Anatomy, and Practical Work, six hours weekly; Pharmacology and Toxicology, two hours weekly. For two years: Special Pathology and Medical Clinic at a Hospital, ten hours weekly; General and Special Surgery, Hospital Clinics, and Operations, ten hours weekly for one year, or five hours weekly for two years. This course may not be taken at the same time as the previous medical course. Obstetrics and Gynæcology, with Clinics, three hours weekly for one year; Eye and Ear Clinics, Use of Ophthalmoscope, Operations, four hours weekly for one year; Forensic Medicine, two hours weekly for one year.

The professors receive fixed salaries, varying from 120*l.* to 480*l.* annually, and increased every ten years by the addition of from 20*l.* to 50*l.* The students' fees for the entire course vary in different schools from 36*l.* to 52*l.*

Regulations for the Staats-Examen.

The examination for the licence to practise as a Physician, Surgeon, and Accoucheur, in any part of the German Empire, may be either passed before the Medical Examination Commission at Berlin, or before a Medical Examination Committee at any German University. The Examination Committees, consisting of scientifically educated professional men in all branches of the Faculty, are appointed every year by the authorised Central Board, on whose decision it depends whether the President of the Commission shall be selected from the examiners or not. The notice for examination before the superior Examination Committee must be deposited with the Minister of Medical Affairs at Berlin, and the notice for examination before an Academical Examination Committee with the acting Curator of the University chosen, or, in default of such functionary, with the nearest superior Court of the Examination Commission. To the notice for examination must be attached: 1. A certificate of having completed a course of study at a gymnasium; 2. A certificate of the full course of medical study at an University; 3. A certificate of proficiency at the Natural Science Examination of some German University; 4. Proof that the candidate has taken part and had practice for at least two terms both in Clinical Surgery and in Clinical Medicine, and in Clinical Midwifery has attended at least four separate labours; 5. A testimonial from a public vaccinator, or some other recognised medical man, that the candidate has acquired the necessary dexterity in Vaccination.

The examinations commence every year in November, and are continued beyond the middle of July in the following year.

Candidates who have not reported themselves at the latest by the end of the year, and who have not deposited the certificates required, are not admitted to examination before the November following. Exceptions to this rule can only be made under very special circumstances.

The examination is divided into five parts, viz.: 1. Anatomical, Physiological, and Pathological; 2. Surgical and Ophthalmic; 3. Medical; 4. Gynæcological; 5. *Vivâ voce*. All candidates, without exception, must pass these examinations in the above order.

In the first portion, the candidate has to write essays on the various subjects, and also to demonstrate on the dead body, and reply to questions put to him.

In the second portion, the candidate has to undergo a clinical and a technical test. The clinical part is conducted in the surgical department of a large hospital, or in the clinic of an University, and usually lasts from seven to nine days, the candidate during this period taking charge of several patients, under the supervision of one of the examiners. During this period, also, the candidate may be required to satisfy the examiners that he can operate on the dead body, and is always required to give his diagnosis in an ophthalmic case.

The third portion of the examination is devoted to medicine, and is purely clinical. The candidate is examined in a hospital or in a clinic of an University, and is required to write prescriptions, and to give his opinion as to the doses of certain drugs used in certain cases of sickness.

The fourth portion consists in an examination conducted in the Charity Lying-in Hospital at Berlin, or in the Lying-in Hospital of an University. The candidate has to examine cases in the presence of an examiner, and to give the diagnosis, prognosis, and treatment. He is also required to attend a case

of labour in the presence of an examiner, and to write down his opinion afterwards, stating the exact presentation, &c. He is also required to undertake the treatment of cases during seven days, under the superintendence of an examiner.

The fifth portion, the *vivâ voce* examination, is conducted publicly, under the superintendence of the President of the Examination Commission, by three Commissioners. To this examination, only those candidates are admitted who have satisfactorily passed the previous portions. This examination includes General and Special Pathology, Therapeutics, Surgery, Midwifery, Pharmacy, and Hygiene. Any candidate who fails to pass these five portions of the examination twice will not be readmitted to examination.

The fee for the examination is 204 marks (or 10*l.* 4*s.* English money), viz.:

	£	s.	d.		Marks.
1st portion.....	2	6	0	=	46
2nd ,, ...	3	3	0	=	63
3rd ,, ...	1	14	0	=	34
4th ,, ...	1	4	0	=	24
5th ,, ...	0	6	0	=	6
Expenses...	1	11	0	=	31
	10	4	0		204

The examinations are always conducted in the German language.

UNIVERSITY OF BERLIN.*

THE conditions for promotion to the Doctorate of Medicine, Surgery, and Midwifery, at the Royal Frederick William University in Berlin, are as follows.

1. Candidates must have studied medicine at least four years in one or more regularly constituted Universities. Universities and Medical Colleges abroad are deemed equivalent to the Universities in Germany. 2. Candidates under 30 years of age who have not matriculated at this University, or who have left previously to their application for promotion, must matriculate again. This can be done free of cost. Both these and matriculated students of this University must, before making application for promotion, take out a preliminary certificate of having left, and will not receive the real certificate until after promotion. 3. The candidate has to make application to the Dean, handing in at the same time the documents mentioned under 1 and 2. He has then to pass a written and verbal preliminary examination before the Dean, before being admitted to the *examen rigorosum* before the Faculty. The verbal examination is generally conducted in German or Latin, and extends to all branches of theoretical and practical medicine. At the written examination, an *ex tempore* essay must be written, without any assistance, in a given time. 4. After the preliminary examination, the Dean lays before the Faculty the documents having reference to the personality and the course of studies of the candidate, the judgment respecting the preliminary examination, and the essay composed thereat. Should that body decide for admission, the Dean will appoint as early a time as possible for the *examen rigorosum*. 5. The *examen rigorosum* takes place before six members of the Faculty, is verbal only, and is concluded at one sitting, each of the examiners examining the candidate for a quarter of an hour. No branch of theoretical and practical medicine and surgery is excluded. It is generally held in German, but, if necessary, in Latin. From this examination, no candidate can be exempted. If he be rejected, six months must elapse before re-admission. 6. After this, the candidate must present a German or Latin dissertation. The members of the Faculty are ready to advise the candidate as to the choice of a subject for his essay; but the essay must be entirely original; and the candidate must declare on oath in writing that he has composed it entirely himself. If the manuscript be pronounced good by the Faculty, the candidate will have to get printed, at his own expense (about 85 *marks*), by a certain printer, a prescribed number of copies. It must consist of at least two quires, and give evidence of a good scientific knowledge. To this must be annexed a brief *curriculum vitæ*, and at least three theses approved by the Dean. 7. After this, follows the public discussion in the Aula of the University. The discussion has reference both to the dissertation and to the theses. Next, the opponents chosen by the candidate, who must be at least three in number, divide on the subject. Their names must appear on the title-page of the dissertation. Afterwards, anyone belonging to the University is at liberty (*e coronâ*) to oppose. Both the candidates and the opponents must be dressed in black. The discussion is either in German or in Latin. The Minister of Education has the privilege of allowing the use of another language, and also of dispensing with the discussion. 8. After the discussion is ended the oath-taking and promotion of the candidate as a Doctor of Medicine, Surgery, and Midwifery takes place, conducted by the Dean or his representatives. After the ceremony of promotion is completed, the Dean delivers the diploma to the newly created doctor, who inscribes his name in the book of the Faculty. The expense of making out the diploma (15 *marks*) is borne by the candidate. A copy of it is fixed on the black board of the Faculty, and a certain number of copies are delivered to the Registrar of the University, for distribution. Promotion *in absentiâ* can on no account take place. 9. Four hundred and forty *reichsmarks* (22*l.*) must be paid to the Dean as fees for the Degree of Doctor in Medicine, of which 221 *marks* must be paid on application and are forfeited after the *examen rigorosum*, if the candidate be unsuccessful. The second portion (204 *marks* for the Faculty and 15 *marks* for the University library) may be paid either at the same time with the other or within the period within the *examen rigorosum* and the promotion. In addition to this, the candidate has to pay expenses of printing the dissertation and diploma (*vide* 6 and 8). 10. The shortest time in which the whole of the proceedings for obtaining a doctor's degree can be gone through is ten days. In this case, however, it is stipulated that the dissertation be delivered ready for printing to the Dean at the first application, and that the other business of the Faculty permits them to proceed at once to the examinations.

The Medical Faculty of this University consists of the following professors, with between forty and fifty *docents* or private teachers. *Ordinary Professors:* W. Waldeyer, Anatomy; A. Bardeleben, Surgery and Clinical Surgery; R. Virchow, Pathology; F. T. Frerichs, Medicine and Clinical Medicine; E. Du Bois-Reymond, Physiology; A. Hirsch, Medicine

* For much of the information in this and subsequent pages, we are indebted to Dr. Hardwicke's *Medical Education and Practice in all Parts of the World.*

and History of Medicine; E. Leyden, Medicine and Clinical Medicine; E. von Bergmann, Surgery and Clinical Surgery; C. Schröder and A. Gusserow, Obstetrics and Gynæcology; O. Liebreich, Materia Medica; C. Schweigger, Diseases of the Eye and Ophthalmic Clinic; C. Westphal, Psychology and Psychiatric Clinic. *Extraordinary Professors:* E. Henoch, Diseases of Children; F. Gurlt, Practical Surgery; C. Liman, Forensic Medicine; C. Skrzeczka, Hygiene and Medical Police; J. Meyer, Medicine; R. Hartmann, Anatomy; G. Lewin, Diseases of the Skin and Syphilis; H. Jacobson, Medicine; H. Munk, Physiology; C. A. Ewald, Physical Diagnosis; A. Lucae, Aural Surgery; E. Salkowski, Chemistry; G. Fritsch, Physiology; O. Fräntzel, Medicine; H. Senator, Diseases of Children; F. Bush, Surgery; H. Kronecker, Physiology; H. Fasbender, Gynæcology; H. L. Schöler, Ophthalmic Surgery; J. Hirschberg, Ophthalmic Surgery; E. Küster, Surgery; A. Christiani, Physiology; M. Bernhardt, Medicine; W. Zülzer, A. Tobold, E. Sonnenburg, Surgery. The following professors also give instruction in subjects connected with medicine in the Philosophical Faculty. *Ordinary Professors:* S. Schwendener, Botany; H. Helmholtz, Physics; A. W. Hofmann, Chemistry; A. W. Eichler, Botany; F. Rudorff, Chemistry.

The institutions for Clinical Teaching connected with the University are—the Institute for Clinical Surgery (Director, Dr. Von Bergmann); the Medical Polyclinic (Dr. Meyer); the Obstetric Clinic (Dr. Schröder); the Ophthalmic Clinic (Dr. Schweigger); the Aural Clinic (Dr. Lucae). In the Charité Hospital are the Medical Clinics (Dr. Frerichs and Dr. Leyden), the Surgical Clinic (Dr. Bardeleben), the Obstetric Clinic (Dr. Gusserow), the Gynæcological Clinic (Dr. Gusserow), the Clinics for Diseases of the Skin and Syphilis (Dr. Lewin), for Diseases of Children (Dr. Henoch), and for diseases of the Mind and Nervous System (Dr. Westphal). The Pathological Institute is under the direction of Professor Virchow; The Physiological Laboratory under that of Professor Du Bois-Reymond; the Chemical Laboratory under that of Professor Hofmann; the Pharmaceutical Laboratory under that of Professor O. Liebreich; and the Physical Institute under that of Dr. von Helmholtz. A Professorship of Hygiene is about to be established, and a special institute is to be created.

UNIVERSITY OF BONN.

A DEGREE in Medicine, Surgery, and Midwifery is granted only under the following conditions:

1. An examination in all branches of Medicine and Surgery of about three hours' duration in the German language; 2. A written scientific dissertation in German or Latin; 3. Public defence of the dissertation in German or Latin; 4. Fee for the examination and diploma, 360 *marks* (18*l.*), which must be paid prior to examination.

The following are the Professors in the Medical Faculty of this University. *Ordinary Professors:* C. Binz, Materia Medica; F. Trendelenburg, Surgery; C. Köster, Pathology; A. de la Valette St. George, Anatomy and Histology; F. von Leydig, Comparative Anatomy; E. Pflüger, Physiology; H. Rühle, Medicine; T. Sämisch, Diseases of the Eye; G. Veit, Obstetric Medicine and Gynæcology. *Extraordinary Professors:* C. Finkelnburg, Mental Diseases; J. Doutrelepont, Surgery; C. von Mosengeil, Surgery; H. Schaaffhausen, Physiology; M. Nussbaum, Anatomy and Histology; H. Walb, Diseases of the Eye and Ear; H. Ribbert; D. Finkler; F. Fuchs.

Connected with the University are medical, surgical, obstetric, and ophthalmic clinics; an anatomical theatre and museum, and physiological, pathological, pharmacological, physical, botanical, and chemical institutes.

UNIVERSITY OF BRESLAU.

THE following Professors belong to the Medical Faculty of this University. *Ordinary Professors:* A. Biermer, Medicine; E. Ponfick, Pathology; H. Fischer, Surgery; R. Förster, Ophthalmic Surgery; H. Häser, Materia Medica and Therapeutics; C. Hasse, Anatomy; R. P. H. Heidenhain, Physiology; H. Fritsch, Obstetrics and Gynæcology. *Extraordinary Professors:* L. Auerbach, Comparative Anatomy; H. Cohn, Ophthalmology; R. Gscheidlen, Physiology and Physiological Chemistry; I. Klopsch, Surgery; A. Neisser, Diseases of the Skin and Syphilis; H. Neumann, Physiological Medicine; E. Richter, Surgery; R. Voltolini, Diseases of the Ear; L. Hirt, Forensic Medicine and Hygiene; H. Sommerbrodt, Medicine; O. Berger, Medicine; H. Gierke; O. Soltmann; H. Magnus; — Born, Anatomy.

The University possesses anatomical, physiological, pathological, pharmaceutical institutes, and clinics of medicine, surgery, obstetrics, ophthalmic surgery, syphilis and skin-diseases, and mental diseases.

UNIVERSITY OF ERLANGEN.

THE following are the regulations to be observed by candidates for the degree of Doctor of Medicine in this University.

1. Candidates for the degree of Doctor must announce their intention to the Dean of the Faculty of Medicine and present: *a.* Evidence of having gone through the curriculum in a German gymnasium, or proof of equivalent general education; *b.* Proof of having studied medicine in one of the German Universities, or in a corresponding medical school abroad, during at least three years; *c.* A thesis, composed by the candidate, on some subject in medicine or natural science, with a written declaration, on word of honour, that the work is absolutely the candidate's own. 2. The dissertation is examined by a referee, appointed by the Dean; and, if it be judged to be of sufficient merit, the candidate is admitted to an oral examination, which is conducted in the German language. 3. After the conclusion of the oral examination, the examiners decide on the result. If the decision be favourable, the degree of Doctor is at once conferred. 4. The candidate, if his dissertation be approved, must have it printed at his own expense. At the back of the title-page it must be stated that the dissertation is printed with the consent of the Faculty, and the name of the reporter (*referent*) must be given. 5. The candidate must pay a fee of 300 *marks* (equal to about 15*l.* 10*s.*) for the granting of the Doctor's degree, and must also deliver 150 copies of his dissertation to the Faculty. 6. If the candidate fail to pass the examination, half of the fee is returned to him.

The Medical Faculty of this University consists of the following professors, with teachers. *Ordinary*

Professors: J. von Gerlach, Anatomy; F. A. Zenker, Pathology and State Medicine; W. Heineke, Surgery; I. Rosenthal, Physiology; W. O. Leube, Practice of Medicine and Clinics; H. Sattler, Ophthalmology; P. Zweifel, Midwifery. *Extraordinary Professors:* F. W. Hagen, Psychological Medicine; W. Filehne, Materia Medica and Therapeutics; F. Penzoldt, Medicine; L. Gerlach.

In connection with the University are the following institutions: the University Hospital, with medical, surgical, obstetric, psychiatric, and ophthalmic clinics; an anatomical, a physiological, and a pathological institute.

UNIVERSITY OF FREIBURG.

THE Faculty of Medicine here grants a degree in Medicine, Surgery, and Midwifery. The following are the conditions to be observed before being admitted to examination.

1. A certificate must be produced showing the respectability of the candidate, and also the amount of his education, both prior to and since his admission as a medical student. 2. A scientific dissertation must be handed to the Dean, written in German or Latin. 3. A fee of 300 *marks* (15*l.*) must be paid to the Chief Beadle. In case of rejection, the candidate will receive half the fee back; and when he presents himself for examination again, he pays only that amount—viz., 150 *marks*. Should these conditions be complied with, and the thesis be deemed satisfactory, the candidate will be admitted to a *vivâ voce* examination in the German language. The following are the subjects for examination: Anatomy, Materia Medica and Toxicology, Physiology, Medicine, Surgery, Pathological Anatomy, Midwifery, Ophthalmology. If a candidate have already passed an examination as Physician before a German Commission of Examiners, the number of subjects may be reduced. If the examination be passed, one of the following grades of honour is conferred: (1) *Summâ cum laude;* (2) *Insigni cum laude;* (3) *Cum laude.*

The Medical Faculty of the University is thus constituted. *Ordinary Professors:* A. Ecker, Human and Comparative Anatomy; R. Maier, Pathological Anatomy and State Medicine; A. Hegar, Midwifery; F. Hildebrand, Botany; W. Manz, Ophthalmic Surgery; Ch. Bäumler, Medicine; F. F. L. Thomas, Materia Medica and Medicine; P. Kraske, Surgery; E. Baumann, Physiological Chemistry; R. Wiedersheim, Anatomy; J. von Kries, Physiology. *Extraordinary Professors:* A. Schinzinger, Surgery; J. von Rotteck; H. Strosser; L. Kirn; M. Schottelius.

The University Library contains 250,000 volumes. There are a chemical laboratory and institutions for the practical study of anatomy, pathology, physiology, &c., and medical, surgical, obstetric, and ophthalmic clinics.

UNIVERSITY OF GIESSEN.

THE Faculty of Medicine grants a degree in Medicine, Surgery, and Obstetrics, which can only be obtained on the following conditions.

1. A *curriculum vitæ*, written by himself, must be sent to the Faculty by the candidate; also a certificate of gymnasial maturity, and a certificate of at least three years' medical and surgical study at a university or a medical institution. If the candidate be not a native of Germany, he must produce a certificate of sufficient preliminary studies from his own country, in place of the gymnasial maturity certificate. 2. The candidate must present a dissertation on some medical subject, written in German or Latin, together with a declaration in his own handwriting that the dissertation is his own composition; or a previously published treatise or literary production may be substituted. 3. The whole of the documents are laid before the Rector and the Chancellor, who may object to them if they be not satisfied. 4. If no such objection be made, and the candidate have paid the promotion fees, the dissertation is judged by a referee. If the referee declare the work to be unsatisfactory, the candidate is rejected. In the contrary case, he is admitted to *vivâ voce* examination before the Faculty. 5. This examination takes places in the German language, and lasts two or three hours. It is held in public, except when the candidate is advanced in age, or in a few other cases, when the Faculty decree that it may be held in private. 6. The examination embraces Anatomy, Physiology, Pathological Anatomy, Histology, Pathology, and Medicine, Materia Medica and Therapeutics (including Toxicology), Surgical Pathology and Surgery, Forensic Medicine, and Obstetrics. 7. Immediately after the conclusion of the examination, the result is decided on by the President and examiners in a private sitting, and at once made known to the candidate. The examination is not passed, when two or more members of the Faculty declare the result of the examination to have been unsatisfactory. The degree is granted either *cum laude*, *magnâ cum laude*, or *summâ cum laude*. 8. The approved dissertation must be printed and published, and the appointed number be presented to the Faculty before the promotion takes place; except when the candidate has already handed in a printed treatise. 9. Promotions to M.D. *in absentiâ* do not take place at this University, except in the case of degrees granted *honoris causâ*, by the unanimous decision of the Faculty, to men who have rendered some great service to the science of medicine. 10. The fee for promotion is 440 *marks* (22*l.*), which must be paid at the time of the petition for admission. If the candidate be not admitted to the verbal examination, 100 *marks* are retained. If the verbal examination be not passed, half the fees are forfeited; but, if the candidate present himself again, he has only to pay half the fees.

The following are the professors in the Faculty of Medicine in this University. *Ordinary Professors:* H. Bose, Surgery; J. Wilbrand, Forensic Medicine and Hygiene; C. Eckhard, Physiology; F. Riegel, Medicine; R. Kaltenbach, Obstetrics and Gynæcology; G. Pflug, Veterinary Medicine; F. W. von Hippel, Ophthalmic Surgery; C. Gähtgens, Materia Medica; E. Boström, Pathological Anatomy; *Extraordinary Professors:* F. Birnbaum, Diseases of Children; F. Eichbaum, Histology and Veterinary Medicine; L. Winckler.

The University Library contains 140,000 volumes. There are an academical hospital, with medical, surgical, and ophthalmic clinics, a lying-in institution, a chemical laboratory, a physiological, a pathological, and a pharmacological institute.

UNIVERSITY OF GOTTINGEN.

A DEGREE in Medicine, Surgery, and Obstetrics is granted under the following conditions.

1. A written essay must be sent in on any medical subject chosen by the candidate, on the result of which depends the entrance to the examination. 2. If the essay be considered satisfactory, the student is admitted to a *vivâ voce* examination, which lasts a few hours, and is always held in German or Latin, at the option of the candidate. 3. A fee of 439 *marks* (21*l.* 19*s.*) must be paid to the Medical Faculty prior to examination. 4. The subjects of examination are Anatomy and Morbid Anatomy, Physiology, Pharmacology, General Pathology and Medicine, Surgical Pathology and Surgery, Toxicology, Medical Jurisprudence, and Obstetrics.

If the candidate be successful, he receives a diploma, and promises to hold his academical honour with dignity.

The Medical Faculty of this University consists of the following professors, with private teachers. *Ordinary Professors:* J. Henle, Anatomy; F. Wöhler, Chemistry; G. Meissner, Physiology; H. Schwartz, Midwifery and Diseases of Women; L. Meyer, Psychological Medicine; Th. Leber, Ophthalmic Surgery; W. Ebstein, Medicine; W. Marmé, Materia Medica; F. König, Surgery; J. Orth, Pathology. *Extraordinary Professors:* C. F. Lohmeyer, Surgery; J. Rosenbach, Surgery; W. Krause, Physiology; E. F. W. Herbst, Physiology; T. Husemann, Materia Medica and Toxicology; K. Flugge, Physiology; R. Deutschmann, Ophthalmic Surgery; O. Damsch.

The following institutions are connected with the Medical Faculty: institutions for teaching animal and vegetable physiology and pharmacology, and pathology; the Ernst-August Hospital, with medical, surgical, and ophthalmic clinics; a lying-in hospital; a psychiatric clinic in the Lunatic Asylum; a chemical laboratory; and a veterinary institute.

UNIVERSITY OF GREIFSWALD.

The Medical Faculty of this University consists of the following professors, with teachers. *Ordinary Professors:* J. Budge, Anatomy and Physiology; H. C. A. Pernice, Midwifery and Diseases of Women; F. Grohé, Pathological Anatomy; F. Mosler, Medicine; P. Vogt, Surgery; L. Landois, Physiology; R. Schirmer, Ophthalmic Surgery; H. Schulz, Materia Medica. *Extraordinary Professors:* C. Eichstedt, Midwifery, Diseases of the Skin, and Syphilis; W. Häckermann, Forensic Medicine and Hygiene; R. Arndt, Psychology and Nervous Diseases; P. Krabler, Diseases of Children; F. Sommer, Anatomy; F. Rinne; the Baron von Preuschen von Liebenstein; A. Budge.

The University Hospital contains medical, surgical, ophthalmic, and obstetric clinics.

UNIVERSITY OF HALLE.

The following are the regulations for the medical degree.

1. Application for admission to the examinations must be made to the Dean, and at the same time must be presented:—(*a*) *curriculum vitæ;* (*b*) certificate of maturity from a gymnasium; (*c*) certificate of having passed a *tentamen physicum* at least two years previously; (*d*) certificates of having passed, in the Universities, at least eight medical scholastic half years. 2. On making application, 360 *marks* must be paid to the Dean for the examinations and the promotion, besides which, 12 *marks* must be paid before the promotion to the Secretary of the University. 3. The examinations are held on two consecutive days, by the regular professors of the Faculty. 4. After passing his examination, the candidate must compose a scientific treatise on some subject in medical science, and deliver it to the Dean, together with the theses to be publicly discussed, and the *curriculum vitæ*, for examination and approval; the same when printed (which must be done at the candidate's expense) must fill at least two quires. 5. The candidate has to request all the examiners personally to be present at the examination, likewise the members of the Faculty. 6. In the application for promotion, the candidate solicits from the Dean permission to defend his treatise and the theses; and this takes place against two previously appointed opponents; after which, those present are also called upon to join in the discussion. After the discussion is ended, the doctoral oath is administered, and the diploma delivered to the candidate. 7. Whoever fails to pass the examination, which includes all branches of medicine and surgery, will receive back from the fees paid 40¼ *marks*. 8. The time for taking the degree is left to the candidate. He must not, however, exceed one year from the time of passing the examination to the taking of the degree, else he will have to submit to re-examination, and must pay again all the fees.

The following professors, with several private teachers, constitute the Medical Faculty of this University. *Ordinary Professors:* L. Krahmer, Materia Medica and Forensic Medicine; Th. Weber, Medicine; R. Olshausen, Obstetrics and Gynæcology; Th. Ackermann, Pathology; H. Welcker, Anatomy; R. Volkmann, Surgery; J. Bernstein, Physiology; A. Gräfe, Ophthalmic Surgery; E. Hitzig, Psychological Medicine; K. J. Eberth, Histology. *Extraordinary Professors:* H. Schwartze, Diseases of the Ear; E. Kohlschütter, Medicine; E. Harnack, Animal Chemistry and Biology; B. Solger, Anatomy; A. Seligmüller, Medicine; R. Pott; A. O. H. Genzmer; B. Küssner; M. Oberst.

The University library contains 100,000 volumes. Connected with the University are a chemical laboratory, a botanical garden, a zoological museum, an anatomical theatre and zootomical museum, a lying-in institution, a medico-chirurgical hospital, and physiological, pathological, and pharmaceutical laboratories.

UNIVERSITY OF HEIDELBERG.

The following are the regulations to be observed for graduation in medicine in this University.

1. In applying for examination for the degree of Doctor, no evidence of previous study is required. 2. The same demands are made of all candidates; the only difference is that the oral examination is shortened, if evidence be produced that the candidate has undergone the German *Staats-examen* for licence to practise. 3. The subjects of examination are (1) Anatomy; (2) Physiology; (3) Pathological Anatomy; (4) Materia Medica (Pharmacognostics, Pharmacodynamics, and Toxicology); (5) Medicine; (6) Surgery; (7) Midwifery; (8) Ophthalmic Surgery. 4. A candidate may select one of these as the principal subject of his examination. All the other subjects then become secondary. 5. The

examination is oral and written. The oral examination can only be conducted in the German language. 6. The written part of the examination consists of a medical dissertation in German or Latin, or a scientific publication by the candidate, which must be given in before the oral examination. The Dean of the Faculty of Medicine delivers this to a reporter for his opinion, who is authorised to hold a conversation with the candidate on the subject treated of in the work. 7. The oral examination comprises the principal subject chosen by the candidate, and a certain number of the secondary subjects. If a state-examination have been passed in the German Empire, the candidate is examined in the principal subject, and in three of the secondary subjects, selected by himself; otherwise, he is examined in five secondary subjects. Of these, three are fixed—Anatomy, Physiology, and Pathological Anatomy; the other two may be chosen by the candidate. But if one of the three fixed subjects be chosen by the candidate as the principal subject, its place as a secondary subject is taken by another, selected by the candidate. 8. The candidate is examined on the principal subject for thirty minutes, on each secondary one for fifteen or twenty minutes. 9. On the result of the entire examination, three notes are granted. The first (*summâ cum laude*) can only be granted when the dissertation has received the *imprimatur* of the Faculty. Even when the *imprimatur* has been received, the result of the oral examination may entitle the candidate to the second vote (*insigni cum laude*) or to the third (*cum laude*). 10. When the diploma is delivered to the candidate by the Dean, he has to give his hand in promise that he will bear his academical dignity with honour. 11. The cost of the examination, exclusive of that of the diploma, amounts in all to 444 *marks* (about 22*l.* 5*s.*), which must be paid before the commencement of the examination. Of this sum, if the oral examination be not passed, 179 *marks* (about 9*l.*) are returned.

The Medical Faculty consist of the following professors, with several teachers. *Ordinary Professors:* F. Kehrer, Midwifery; W. Delffs, Chemistry; C. Gegenbaur, Human and Comparative Anatomy; W. Kühne, Physiology and Histology; O. Becker, Ophthalmic Surgery; Th. von Dusch, Medicine; W. Erb, Medicine; J. Arnold, Pathology; V. Czerny, Surgery; C. Fürstner, Psychological Medicine. *Honorary Professor:* A. Nuhn, Human and Comparative Anatomy. *Extraordinary Professors:* H. Oppenheimer, Materia Medica; S. Moos, Diseases of the Ears; F. Knauff, Forensic Medicine and Hygiene; H. Lossen, Surgery; A. Weil, Medicine and Diseases of the Skin, and Syphilis; R. Thoma, Pathological Anatomy; F. Schultze, Diseases of the Nervous System; A. Jurasz, Diseases of the Throat; J. Steiner; G. Ruge; A. Ewald.

In connection with the University are a hospital, with medical, surgical, and ophthalmic clinics, an institution for diseases of the ear, a lying-in institution, anatomical, pathological, physiological, and zoological institutes, two chemical laboratories, and a botanical garden.

UNIVERSITY OF JENA.

THE Faculty of Medicine of this University grants a degree in Medicine, Surgery, and Obstetrics, the conditions for which are as follow.

1. A certificate must be given as to the extent of medical studies, and the period of time which has elapsed since their completion (at least six terms). 2. Satisfactory evidence must be given as to character, from the neighbouring head office of police. 3. A written essay upon any subject of medical science, in German or Latin, is presented, and may be printed afterwards in the form of a dissertation. 4. Matriculation into this University is done when, upon fulfilment of the other conditions, the candidate himself appears. 5. Payment of examination and promotion fees must be made to the amount of 141 *thalers* (about 22*l.*) In case the examination is not passed, the promotion fees and 52 *thalers* are returned. The examination will be held in the German language only. It comprises all branches of medicine, viz.: Anatomy, Physiology, Histology, General Pathology, Pathological Anatomy, Special Pathology, Medicine, Therapeutics, Surgery, Obstetrics, &c. When the examination is passed, the student has to give in his dissertation, the subject of which he chooses for himself. The Faculty examines the work to see whether it is worth publication. A dispensation from the Latin or German disputation may be granted, when the examination is very satisfactorily passed. After the essay is printed, and also when the public disputation is over, the making out of the medical diploma takes place. The degree of doctor will only be granted in this University by the Faculty upon fulfilment of the above-named conditions.

The Medical Faculty of this University is constituted as follows. *Ordinary Professors:* H. Braun, Surgery; B. Schultze, Obstetrics; W. Müller, Pathology; W. Preyer, Physiology; O. Hertwig, Anatomy; M. J. Rossbach, Medicine; H. Kuhnt, Ophthalmology; F. Weber-Liel, Diseases of the Ear. *Honorary Professor:* M. Siedel, Materia Medica. *Extraordinary Professors:* L. Schillbach, Diseases of the Eye and Ear; C. Frommann, Physiology and Histology; C. Bardeleben, Anatomy; P. Fürbringer, Diseases of the Skin, and Syphilis; O. Küstner, Gynæcology; O. Binswanger.

Connected with the University are the Grand-Ducal hospital, lying-in institution, and lunatic asylum; anatomical, zoological, physiological, pathological, and chemical laboratories and museums, &c.

UNIVERSITY OF KIEL.

THE following are the conditions for obtaining the medical degree: 1. The presentation, on application, of (*a*) *curriculum vitæ;* (*b*) certificate of medical studies; (*c*) a scientific treatise; 2. A written examination; 3. A verbal examination before the Faculty; 4. Payment of 360 *marks*.

In this University the Medical Faculty consists of the following professors, with five private teachers. *Ordinary Professors:* C. C. T. Litzmann, Obstetrics and Gynæcology; F. Esmarch, Surgery; H. Quincke, Medicine; V. Hensen, Physiology; A. Heller, Pathology; C. Völckers, Diseases of the Eye; W. Flemming, Anatomy. *Extraordinary Professors:* J. Bockendahl, Forensic Medicine; G. J. F. Edlefsen, Medicine; F. Petersen, Surgery; A. Pansch, Anatomy; F. A. Falck, Materia Medica; R. Werth, Gynæcology.

There are a medico-chirurgical hospital, containing medical, surgical, and ophthalmic clinics, a lying-in institution, and laboratories and museum in connection with the several subjects taught.

UNIVERSITY OF KÖNIGSBERG.

The Medical Faculty of this University consists of the following professors, with several private teachers. *Ordinary Professors:* L. Hermann, Physiology; R. Dohrn, Obstetrics and Gynæcology; F. S. Merkel, Anatomy; E. Neumann, Pathology; C. Schönborn, Surgery; B. Naunyn, Medicine; J. Jacobson, Ophthalmic Surgery; M. Jaffe, Medical Chemistry. *Extraordinary Professors:* H. Bohn, Diseases of the Skin; A. W. Grünhagen, Histology; S. Samuel, Therapeutics; S. Pincus, Forensic Medicine; E. Berthold, Diseases of the Eye and Ear; F. R. A. Schneider, Surgery and Military Surgery; B. A. Benecke, Anatomy; E. Burow, Surgery; J. Caspary, Diseases of the Skin and Syphilis; P. Baumgarten, Pathology; J. Schreiber; O. Langendorff, Physiology.

Connected with the University are anatomical, pathological, and physiological institutions, medical, surgical, obstetrical, and ophthalmic clinics; chemical and pharmaceutical laboratories, &c.

UNIVERSITY OF LEIPZIG.

The Medical Faculty of this University consists of the following professors and a number of private teachers. *Ordinary Professors:* F. Hofmann, Hygiene; E. Wagner, Medicine; C. S. F. Credé, Midwifery (vacant; Pathological Anatomy; C. F. W. Ludwig, Physiology; C. Thiersch, Surgery; E. A. Coccius, Ophthalmic Surgery; W. His, Anatomy; C. W. Braune, Topographical Anatomy; A. Strümpell, Medicine; P. Flechsig, Anatomy and Histology. *Extraordinary Professors:* H. Sonnenkalb, Forensic Medicine and Hygiene; J. V. Carus, Zoology and Comparative Anatomy; A. Winter, Materia Medica; C. Hennig, Obstetrics; C. H. Reclam, Forensic Medicine and Hygiene; B. G. Schmidt, Surgery; E. F. Wenzel, Anatomy and Histology; J. O. L. Heubner, Medicine; E. R. Hagen, Otology, &c.; A. R. Brenner, Diseases of the Nervous System; E. Drechsel, Physiology; C. Weigert, Medicine; A. Rauber, Anatomy; F. L. Hesse.

In connection with the University are chemical, physico-chemical, and pathologico-chemical laboratories; a zoological institute, under the direction of Professor Leuckhardt; an anatomical institute, under Professor His; a physiological institute, under Professor Ludwig; and various clinics, &c.

UNIVERSITY OF MARBURG.

Any one wishing to proceed to the medical degree at this University must send in to the Dean of the Faculty of Medicine the following:—

1. A *curriculum vitæ*; 2. A certificate of scientific studies; 3. A certificate of at least four years' study at a recognised University or Medical College; 4. A dissertation in the German language. If these be considered satisfactory by the Faculty, the candidate is then admitted to a *vivâ voce* examination in the German language. If the examination be satisfactorily passed, the dissertation must be printed at the candidate's expense, and publicly defended. Three or four printed theses must also be sent in. The cost for the diploma is 330 *marks* (16*l.* 10*s.*).

The following are the professors in the Medical Faculty of this University. *Ordinary Professors:* H. Nasse, Physiology; W. Roser, Surgery; R. Böhm, Pharmacology; P. Ahlfeld, Midwifery; N. Lieberkühn, Anatomy; F. Marchand, Pathological Anatomy and General Pathology; E. Mannkopff, Pathology and Therapeutics; H. Schmidt-Rimpler, Ophthalmology; H. Kramer, Psychology; E. E. Külz, Physiology. *Extraordinary Professors:* G. Wagener, Anatomy; H. Horstmann, Forensic Medicine; H. Lahs, Midwifery; E. Gasser.

A hospital and various laboratories, &c., for practical instruction are connected with the University.

UNIVERSITY OF MUNICH.

In granting medical degrees at this University, a distinction is made between those candidates who have already passed a satisfactory public examination as Physicians before a German Commission of Examiners, and those who have not. From those candidates who have already passed a satisfactory German examination, nothing further is required in order to admit them to compete for the doctorate than the certificate of having passed such examination. The Faculty requires, however, the presentation of a dissertation, written in either the Latin or German language. This is delivered by the Dean to one of the members of the Faculty for examination, and with his judgment it is circulated amongst the Faculty. If the Faculty approve of it, it is printed at the expense of the candidate.

Candidates who have not passed the German State examination must, before being admitted to the doctorate examination, present to the Medical Faculty the following:—1. A gymnasial certificate, or at least such certificate as shows that the candidate has enjoyed a regular education; 2. Certificates of at least four years' attendance at an university or medical institution, and of attendance at the lectures on the principal branches of natural science and medicine; 3. Clinical certificates of the treatment of an internal, surgical, and eye complaint, and also assistance at a birth; 4. A certificate of the performance of an operation on the dead body, and the application of a bandage; 5. The candidate must then pass a two hours' verbal examination (in the German language) in the following branches, viz.: Anatomy, Physiology, General Pathology and Pathological Anatomy, Materia Medica, Therapeutics, Surgery, Midwifery, Hygiene, Diseases of the Eye; 6. The candidate has also to give in a dissertation, which must be examined by a member of the Faculty to see whether it is worthy of being printed. The printing may be dispensed with at the request of the candidate; 7. The fees for examination and promotion amount, for both kinds of candidates, to 100 *thalers*, 300 *marks*, or 175 *florins* (15*l.*).

The professorial staff of the Medical Faculty of this University is constituted as follows:—*Ordinary Professors:* F. X. von Gietl, Medicine; F. C. von Rothmund, Surgery and Clinical Surgery; A. Weismann, Zoology and Comparative Anatomy; F. Seitz, Materia Medica; L. A. Buchner, Pharmacy; M. von Pettenkofer, Hygiene; F. C. L. Winckel, Obstetrics and Gynæcology; J. N. von Nussbaum, Surgery and Clinical Surgery; A. von Rothmund, Ophthalmic Surgery; C. von Voit, Physiology; H. von Ziemssen, Special Pathology and Therapeutics; B. von Gudden, Psychology; C. Kupffer, Anatomy; N. Rüdinger, Anatomy; O. Bollinger, Pathology. *Extraordinary Professors:* H. Ranke, Medicine; J. Amann, Midwifery; A. Martin, State Medicine;

J. Oertel, Laryngoscopy; H. von Bock, Toxicology; J. Bauer, Medicine; H. Helferich, Surgery.

The University, which is situated in the Ludwigstrasse, contains a library consisting of 500,000 volumes. The chemical laboratory for hygiene is under the direction of Professor von Pettenkofer.

UNIVERSITY OF ROSTOCK.

WHOEVER wishes to graduate in medicine at this University must apply to the Dean of the Medical Faculty, and deliver to him the following documents: 1. A certificate of having gone through the requisite course of studies in an university; 2. A certificate of examination, testifying to the ability of the candidate in the practice of medicine; 3. A treatise on any subject appertaining to medical science, composed by the candidate himself. A fee of 350 *marks* must be paid to the Faculty, of which two-thirds will be returned provided the treatise be not deemed satisfactory. If proof of having passed a satisfactory examination in Germany be not given, the candidate is subjected to an examination which pretty nearly corresponds to the German States' Examination. For this examination an additional sum of 200 *marks* must be paid. Only for special cases does the Faculty reserve to itself a special form of examination. The inaugural dissertation must be the candidate's own, and he must append to his treatise a written declaration to that effect. It is not, however, required that the work be composed entirely without assistance; but in this case the literary resorces, and also the name of him or them from whom he has received help, must be clearly and distinctly stated. After the dissertation has been stamped by the Dean in the name of the Faculty, it must be printed at the expense of the author, and at least 125 copies delivered to the Faculty. When the candidate has satisfactorily fulfilled the above conditions, he must introduce his essay, and read it publicly, and defend it against objections.

Promotions *in absentiâ* cannot be made, except only in the case of a *promotio honoris causâ* for distinguished service to medical science.

The Medical Faculty of this University consists of the following *Ordinary Professors*: T. Thierfelder, Special Pathology and Therapeutics; H. R. Aubert, Physiology; W. von Zehender, Ophthalmology; F. Schatz, Obstetrics and Gynæcology; A. von Brunn, Anatomy; O. Nasse, Pharmacology; O. W. Madelung, Surgery; A. Thierfelder, Pathological Anatomy. *Extraordinary Professors:* J. Uffelmann, Medicine; F. Neelsen, Pathology.

UNIVERSITY OF STRASBURG.

THE following is an extract from the regulations of the University of Strasburg relative to Degrees in Medicine.

Any person desirous of obtaining the degree of Doctor of Medicine can only be admitted to graduation on fulfilling the following conditions. *a.* If he belong to the German Empire, he must have completed an academical four years' course of study of Medicine, or of the Natural Sciences. By an unanimous decision of the Faculty, one or two Sessions may be omitted. Foreigners are not required to have passed through the four years' course, if they produce proof of having received instruction equivalent to the course of study in a German Medical Faculty. *b.* He must present a scientific essay (dissertation) composed by himself. *c.* He must undergo the Faculty examination. *d.* He must pay the prescribed fee of 240 *marks*. The examination consists, as a rule, of an oral theoretical examination in all important departments of medicine. If the candidate fail to give satisfaction in the oral examinations, he must, in order to obtain the degree of doctor, again undergo the examination after a time to be determined by the Faculty, but he is not required to present a second dissertation. In the case of candidates who have already passed the State examination, a colloquy before three members of the Faculty may, by the unanimous decision of the Faculty, be substituted for the oral examination. Degrees in Medicine are not conferred on absent candidates. If the dissertation be rejected, the whole fee is returned. If the dissertation be approved, but the candidate fail in the examination, 90 marks are returned to him: but when he is again admitted to examination, only half that fee is required. After the Faculty examination has taken place, and the dissertation has been printed and published, the candidate is formally admitted to the degree of Doctor by the issuing of a printed diploma. The candidate has to bear the expense of printing the dissertation and the diploma. There is no public ceremony, and no oath is administered.

Any one desirous of matriculating as a student, and attending the lectures and other instructions given in the University, must, on his arrival in Strasburg, communicate with the Secretary of the University in order to be inscribed. Other persons desirous of attending the lectures must obtain permission from the respective teachers, and must then at once communicate with the Secretary of the University.

The following are the professors and teachers of the University. *Ordinary Professors:* G. Schwalbe, Anatomy; J. G. Jössel, Anatomy; F. L. Goltz, Physiology; F. Hoppe-Seyler, Physiological and Pathological Chemistry; O. Schmiedeberg, Pharmacology and Therapeutics; F. von Recklinghausen, Pathological Anatomy and Physiology; A. Kussmaul, Medicine; A. Lücke, Surgery and Clinical Surgery; W. A. Freund, Obstetrics and Gynæcology; F. Wieger, Diseases of the Skin, and Syphilis; A. Aubenas, Obstetrics and Gynæcology; F. Jolly, Psychiatry; L. Laqueur, Diseases of the Eye. *Extraordinary Professors:* G. Kohts, Medicine and Diseases of Children; A. Kuhn, Diseases of the Ear; E. Fischer, J. Stitting. There are also several *docents*.

Connected with the University are institutions for the practical study of anatomy, experimental physiology, physiological chemistry, pathology, and pharmacology, and clinics for medicine, surgery, midwifery, mental diseases, diseases of the eye, and syphilis, and diseases of the skin.

UNIVERSITY OF TÜBINGEN.

THE Faculty of Medicine here grants a degree in Medicine under the following conditions.

1. The candidate must send in with his application—*a.* A *curriculum vitæ*; *b.* A certificate of having gone through a thorough course of instruction at the Gymnasium or some equivalent institution; *c.* Proof of a sufficient study of medicine at a university, and certificates of having attended the lectures having reference to the subjects of examina-

tion. 2. The examination consists of a written and a subsequent verbal one. A legalised proof of having passed a satisfactory examination in medicine and surgery in a foreign country dispenses with the written examination, but not with the verbal one. In no case can a degree be granted *in absentiâ*. 3. In the written examination will be put one question in each of the following subjects: 1. Anatomy; 2. Physiology; 3. Materia Medica; 4. General Pathology and Therapeutics; 5. Two questions in Special Pathology and Therapeutics. In addition to these, if a Doctor's degree in Surgery be required, one question will be put on each of the following subjects: 1. General Surgery; 2. Special Surgery; 3. Surgical Operations; 4. Midwifery. 4. The fees amount to 300 *marks*, including the printing of the diploma, which fee must be paid on application. If the candidate be rejected at the written examination, and be not admitted to the verbal one, the whole of the fees will be returned. If he be rejected after the verbal one, only half will be returned. 5. The candidate must compose a dissertation under the presidency of a member of the Faculty, and get it printed; 250 copies are to be presented to the University. If, however, the essay be published either in a periodical or as a special pamphlet, 100 copies will suffice, but they must be provided with a special title-page. Only such candidates as have given numerous and satisfactory literary proofs of their capacity can be allowed to dispense with the composition.

The Medical Faculty of this University consists of the following professors, with private teachers. *Ordinary Professors:* P. Bruns, Surgery; P. Grützner, Physiology; J. von Säxinger, Obstetrics and Gynæcology; C. von Liebermeister, Medicine; T. H. Jürgensen, Materia Medica; A. Nagel, Ophthalmology; P. J. W. Henke, Anatomy; E. Ziegler, Pathology. *Extraordinary Professors:* O. Oesterlen, Forensic Medicine and Hygiene; A. Froriep.

A hospital and institutions for practical instruction are connected with this University.

UNIVERSITY OF WÜRZBURG.

Before being admitted to the examination for the Doctorate of Medicine, Surgery, and Midwifery, the candidate must pass the medical approbation examination, which consists in showing—by testimonials or certificates—that he has a good moral character, and that he has passed through four years' study at an University, six sessions of which must have been devoted to medical studies. Upon fulfilment of these conditions, the candidate will be admitted to a written and *vivâ voce* examination, before which, however, he must pay to the Faculty 300 *marks* (£15). The written examination consists in the composition of an essay on some subject in theoretical or practical medicine, which dissertation must be handed to the Dean, who will give it to one of the examining professors to report on. It is customary for the dissertation to be printed. If the decision of the reporter with regard to the theme be unfavourable, admission to the *vivâ voce* examination is denied, and another theme must be composed and handed in at a future time. Should the second theme, however, be deemed unsatisfactory, the candidate will not be allowed to reappear. He then receives back all his fees except 30 *marks*. If the dissertation be approved by the Faculty, the candidate is admitted to a *vivâ voce* examination, in the German language, which consists of the following subjects: Anatomy and Pathological Anatomy, Physiology, Pathology and Medicine, Special Therapeutics, Surgery, Obstetrics and Ophthalmology. A knowledge also of Psychology and State Medicine is required. After taking the examination oath, the result and standing of the examination is imparted to the candidate by the Dean—whether very good, good, or moderate.

When the candidate is unsuccessful at the *vivâ voce* examination, he receives back half the fees, and is allowed to present himself for examination again in six months' time by paying half the fees again. Only one more attempt is, however, allowed after the first rejection at the *vivâ voce* examination.

After successful examination, the candidate receives his diploma of doctor.

In this University, the Medical Faculty consists of the following professors, with several *docents*. *Ordinary Professors:* A von Kölliker, Anatomy; F. W. Scanzoni von Lichtenfels, Midwifery; H. Maas, Surgery and Clinical Surgery; A. Fick, Physiology; C. Gerhardt, Medicine and Diseases of Children; G. E. Rindfleisch, Pathological Anatomy, General Pathology, and History of Medicine; J. Michel, Ophthalmic Surgery; A. Geigel, Medicine and Hygiene. *Extraordinary Professors:* A. von Troltsch, Aural Surgery; W. Reubold, Forensic Medicine; A. Kunkel.

AUSTRO-HUNGARIAN EMPIRE.

GRADUATION IN MEDICINE.

The Universities of the Austro-Hungarian Empire which possess Medical Faculties and grant degrees in medicine are: Agram (Croatia), Gratz (Styria), Innsbrück (Tyrol), Cracow, Lemberg (Galicia), Pesth (Hungary), Prague (Bohemia), and Vienna.

All the Universities are under Government control, and the degree of Doctor of Medicine obtained at any of them alone gives the right to practise medicine in the empire.

The course of study required of candidates for the degree of Doctor of Medicine in the Universities of the Austrian Empire extends over five years, or five winter and five summer terms or *semesters*. The following arrangement is recommended by the Government. (The first, third, fifth, seventh, and ninth are winter *semesters:* the others are summer *semesters*.) 1st *Semester:* Systematic Anatomy; Experimental Physics, Inorganic Chemistry; General Botany; Dissections. 2nd *Semester:* Systematic Anatomy (second part); Experimental Physics (second part); Organic Chemistry; Special Botany; Mineralogy; Practical Introduction to Chemical Analysis; Practical Introduction to the Use of the Microscope. 3rd *Semester:* Physiology; Histology; Medical Chemistry; Zoology; Dissections. 4th *Semester:* Physiology (second part); Embryology; Exercises in Physiology; in Histology; and in Medical Chemistry. 5th *Semester:* General Pathology and Therapeutics; Pharmacology; Pathological Anatomy; Pathological Histology; *Post mortem* Examinations; Practical Introduction to the Physical Examination of Patients. 6th *Semester:* Pathological Anatomy (second part); Special Pathology, Therapeutics, and Clinic of Internal Diseases; Special Surgical Pathology, Therapeutics, and

Clinic; *Post mortem* Examinations; Exercises in Pathological Histology. 7th *Semester:* Special Pathology, Therapeutics, and Clinic of Internal Diseases; Special Surgical Pathology, Therapeutics, and Clinic; Diseases of the Eye; Exercises in Surgical Anatomy; (Operations). 8th *Semester:* Internal Diseases; Surgery or Diseases of the Eye; Surgical Operations; (Surgical Anatomy). 9th *Semester:* Internal Diseases; Surgery; Theory and Practice of Obstetrics and Gynæcology; Forensic Medicine; (Exercises in Obstetric Operations); Medico-Legal Exercises. 10th *Semester:* Clinics of Diseases of Children; of Diseases of the Skin; and of Syphilis; (Obstetrics and Gynæcology); Exercises in Obstetric Operations; (Medico-Legal Exercises). Of the subjects included in brackets, one course only is required, which may be attended in either a winter or a summer term, at the option of the student.

Candidates for the degree of Doctor of Medicine are required to undergo three examinations (*rigorosen*). Before being admitted, the candidate must produce (*a*) his certificate of birth or baptism, and evidence (*b*) of having received a sufficient preliminary education in one of the institutions of the countries comprised in the empire, or, if he do not belong to any of these, evidence of having matriculated as an ordinary student in a Faculty of Medicine; (*c*) evidence of having attended lectures in a medical school during at least four sessions, and of having dissected during two sessions; (*d*) of having passed, at one of the Universities of the empire, three examinations, in Botany, Zoology, and Mineralogy. Before being admitted to the second examination, he must produce evidence of having been engaged five years in professional study, and of having studied Clinical Medicine and Clinical Surgery, each during four sessions, and Clinical Ophthalmology and Clinical Midwifery, each during at least one session; and of having passed the first examination.

The first examination embraces Physics, Chemistry, Anatomy, and Physiology. There is a practical examination on Anatomy and Physiology, and a theoretical examination on all four subjects.

The second examination includes General Pathology and Therapeutics, Pathological Anatomy and Histology, Pharmacology (pharmacodynamics, toxicology, and prescribing), and the Pathology and Therapeutics of internal diseases. The candidate is examined practically in Pathological Anatomy (with preparations and on the dead body), and in Medicine (at the bedside); and theoretically in all the subjects.

The third examination embraces Surgery, Ophthalmic Surgery, Midwifery and Diseases of Women, and Forensic Medicine. The examinations in Surgery, Ophthalmic Surgery, and Midwifery, are practical; and there are theoretical examinations in all the subjects.

All these examinations must take place at the same University. In very exceptional circumstances only is a candidate allowed to pass the second or third examination at another University than that at which he has passed the first.

The examinations are public, and are conducted by a president, the regular examiners, extraordinary examiners when required by the number of candidates, the Government commissioner; and at the second and third there is a co-examiner appointed by the Government. Each member of the commission examines for a quarter of an hour.

A candidate is not admitted to the theoretical examination unless he has satisfied the examiners in the practical one. If he fail at the practical examination, he may present himself again at the end of six months; if again rejected, six months must elapse before he can be again examined. A candidate rejected at the theoretical examination by one examiner only may be re-admitted to examination in the subject in which he is deficient, at the end of two months. If again rejected, he cannot be again examined in less than four months. If rejected at the theoretical examination by more than one examiner, he may re-appear a second and third time at intervals of six months. A rejected candidate can, however, be examined a third time, whether in practice or in theory, with the sanction of the Minister of Public Instruction, and the consent of the College of Professors; and if he then fail, he is debarred henceforth from obtaining a degree in medicine in any of the Universities of the empire.

The fee for the first examination is 55 florins, for the second 60 florins, and for the third 65 florins (Austrian). The promotion fees for the Doctorate amount to 60 Austrian florins. The total fee for the M.D. degree is about £23 of English money.

UNIVERSITY OF VIENNA.

IN this University, the Medical Faculty is constituted as follows. *Ordinary Professors:* E. von Brücke, Physiology; E. Albert, Surgery; C. Langer, Anatomy; C. R. Braun von Fernwald, Obstetrics and Gynæcology; H. von Bamberger, Medicine; H. Kundrat, Pathological Anatomy; H. Nothnagel, Medicine; J. Späth, Obstetrics and Gynæcology; C. Stellwag von Carion, Ophthalmic Surgery; Th. Billroth, Surgery; G. Braun, Midwifery (for Midwives); E. Hofmann, Forensic Medicine; I. Neumann, Syphilology; S. Stricker, Experimental and General Pathology and Therapeutics; T. Meynert, Psychiatry and Nervous Diseases; A. E. Vogl, Pharmacology and Pharmacognosy; E. Ludwig, Chemistry; M. Kaposi, Diseases of the Skin and Syphilis; K. Toldt, Anatomy; H. Widerhofer, Diseases of Children. *Extraordinary Professors:* J. Seegen, Balneology; C. Cessner, Use of Instruments and Bandages; H. Zeissl, Syphilology; M. F. Röll, Contagious Diseases; L. Schlager, Psychiatry; F. Müller, Veterinary Medicine; L. Dittel, Surgery; M. Leidesdorf, Psychiatry; M. Schwanda, Medical Physics; M. Benedikt, Electro-Therapeutics and Neuro-Pathology; S. Stern, Elementary Clinical Instruction; A. Politzer, Aural Surgery; J. Grüber, Aural Surgery; J. Weinlechner, Surgery; S. L. Schenk, Embryology; A. Drasche, Epidemiology; A. R. von Mosetig-Moorhof, Surgery; J. Nowak, Hygiene; C. Stoerk, Laryngoscopy; L. von Schrotter, Diseases of the Chest and Larynx; H. Auspitz, Diseases of the Skin and Syphilis; J. Neumann, Diseases of the Skin; M. Kaposi, Diseases of the Skin; F. Salzer, Surgery; S. Exner, Physiology; M. Rosenthal, Diseases of the Nervous System; G. Wertheim, Diseases of the Skin and Syphilis; S. von Basch, Experimental Pathology; T. Puschmann, History of Medicine; J. Schnitzler, Medicine; R. Chrobak, Gynæcology; K. von Rokitansky, Pathology; L. Bandl, Obstetrics and Gynæcology; E. von Stoffella, Special Pathology and Therapeutics. The following private teachers have the title of professor: L. Mauthner, Ophthalmic Surgery; C. Bohm, Surgery; L. M. Politzer, Diseases of Children;

W. Winternitz, Medicine ; A. Monti, Diseases of Children. There are also between eighty and ninety private teachers, adjuncts, and assistants.

The General Hospital (*Allgemeine Krankenhaus*) is capable of accommodating about 2,000 patients. There are two medical clinics, under Professors Duchek and von Bamberger ; two surgical clinics, one of which is under Professor Billroth ; a clinic for Diseases of the Eye, under Professors von Arlt and Stellwag von Carion ; and three clinics for Obstetrics—two for students being under the charge of Professors Carl Braun-Fernwald and Späth, and one for Midwives under Professor Gustav Braun. The clinics for Diseases of Women are under the charge of Professors Braun-Fernwald and Späth. There are also special clinics for Syphilis, under Professor Sigmund ; for Laryngoscopy, under Professor Schrötter ; for Diseases of Children, under Professor Widerhofer ; for Psychology, under Professor Meynert ; and for Otology, under Professor Grüber. A considerable portion of the school is also situated within the hospital ; thus there are the Pathological Museum and *post mortem* room, under the direction of the professor of Pathology ; the room for medico-legal necropsies, under Professor Hofmann ; the Institute for Experimental Pathology, under the direction of Professor Stricker ; and the Institute of Chemical Pathology, under Professor Ludwig. The Anatomical Institute and Dissecting Room, under the direction of Professor Langer ; the Physiological Institute, where the Practical Physiology is carried on under Professor Brücke ; the Materia Medica Museum, and the Medical Library are outside the hospital, in the Alsergrund.

The great clinics on medicine, surgery, &c., are conducted during the two sessions, from the middle of October to the middle of March, and from the middle of April to the end of July. They are under the immediate direction of the Professors of the Medical Faculty, and constitute, of course, an essential part of the curriculum of study for the ordinary Austrian student.

The special courses of instruction are most numerous during the regular academical sessions, but there are always some going on, even in August and September. They last usually from four to eight weeks. The courses are given for the most part by the private lecturers and the professors' assistants, and the material for them is derived from the wards of the clinical professors. For a six or eight weeks' course, the fee is usually from fifteen to twenty florins. The instruction in them is demonstrative or practical, involving the use of instruments and apparatus by the students themselves. Clinical instruction on children's diseases is given at the St. Anne's Hospital. This and many other of the courses are often attended by students for a second or even third time. A student desirous of occupying his time to the best advantage at Vienna must be prepared to expend a considerable sum in fees.

Vienna affords great opportunities for the study of pathological anatomy. There are separate *post mortem* rooms for the cases from the clinical wards, medico-legal cases, and the ordinary cases. At the two former, the clinical professor or assistant is usually in attendance. The examinations go on all the morning, there being sometimes as many as a dozen in one day.

Besides the General Hospital, Vienna possesses the Wieden Hospital (600 beds), the Rudolf Institution for the Sick (*K. K. Krankenhaus Rudolfstiftung*) (860 beds), the Lunatic Asylum, the General Polyclinic or Dispensary, the Lying-in Hospital, the Leopoldstädt Children's Hospital (90 beds), the Crown Prince Rudolf Children's Hospital (40 beds), St. Joseph's Children's Hospital at Wieden (100 beds), St. Anne's Children's Hospital (100 beds), &c.

UNIVERSITY OF BUDA-PESTH.

The Medical Faculty of this University consists of the following professors. *Ordinary Professors :* J. Lenhossek, Anatomy ; G. Mihalkovics, Anatomy ; G. Scheuthauer, Pathological Anatomy ; E. Jendrassik, Physiology ; K. Balogh, Pharmacognosy and General Pathology ; T. A. Lumnitzer, Surgery ; T. Kézmarszky, Obstetrics ; J. Wagner and F. Koranyi, Medicine and Clinical Medicine ; J. Kovacs, Surgery ; W. Schulek, Ophthalmic Surgery ; A. Ajtai, Forensic Medicine ; J. Fodor, Hygiene ; J. Bókai, Diseases of Children ; T. Margó, Histology ; A. Török, Anthropology ; A. Hógyes, General and Experimental Pathology. *Extraordinary Professors :* L. Gebhardt, Diseases of the Chest ; E. Poor, Diseases of the Skin ; E. Navratil, Rhinoscopy and Laryngoscopy ; T. Bakody, P. Plósz, Physiological and Pathological Chemistry ; D. Nedelka, Dental Surgery ; J. Böke, Aural Surgery ; E. Schwimmer, Diseases of the Skin and Syphilis ; C. Laufenauer, Psychiatry ; B. Stiller ; G. Antal. There are several *docents.*

UNIVERSITY OF CRACOW.

The Medical Faculty of this University consists of the following professors, with several *docents. Ordinary Professors :* E. Korczynski, Special Pathology and Therapeutics ; — Rydygier, Surgery ; J. Mikulicz, Surgery ; G. Biotrowsky, Physiology and Histology ; L. Teichmann, Descriptive Anatomy ; M. Madurowicz von Jelita, Midwifery and Gynæcology ; S. Janikowski, Forensic Medicine ; L. Rydel, Ophthalmic Surgery ; A. Stopczanski, Medical Chemistry ; A. Adamkiewicz, General and Experimental Pathology ; L. Blumenstock, Forensic and State Medicine ; T. Browicz, Pathological Anatomy. *Extraordinary Professors :* A. Rosner, Diseases of the Skin and Syphilis ; J. Oettinger, History of Medicine ; M. L. Jakubowski, Diseases of Children ; S. Domanski, Diseases of the Nervous System ; — Obalinski, Surgery ; — Parenski. There are also several *privat-docents* and assistants.

UNIVERSITY OF GRATZ.

In this University, the Medical Faculty consists of the following professors, with about twelve *docents. Ordinary Professors :* A. Schauenstein, Forensic Medicine ; E. Zuckerkandl, Descriptive and Topographical Anatomy ; K. von Rzehaczek, Surgery ; C. von Helly, Midwifery and Gynæcology ; A. Rollett, Physiology and Histology ; C. Blodig, Ophthalmic Surgery ; O. Rembold, Medicine ; J. Eppinger, Pathological Anatomy ; C. von Schroff, Materia Medica and Therapeutics ; C. B. Hoffmann, Medical Chemistry ; V. von Ebner, Histology and Embryology ; R. von Krafft-Ebing, Psychiatry ; — Gruber, Hygiene. *Extraordinary Professors :* J. von Koch, Epidemic Diseases and Sanitary Police ; E. Lipp, Diseases of the Skin ; R. Klemensiewicz, Experimental and General Pa-

thology; E. Börner, Obstetrics and Gynæcology; C. Zini.

Connected with the University are anatomical, physiological, pathological, and zoological institutes; medical, surgical, ophthalmic, obstetric, and gynæcological clinics; a laboratory for physiological and pathological chemistry; a chemical laboratory, &c. The hospitals are: the general hospital (700 beds); a lying-in hospital (120 beds); the town hospital (80 beds); a children's hospital (80 beds); and two infirmaries (245 beds).

UNIVERSITY OF INNSBRUCK.

THE following professors belong to the Medical Faculty. *Ordinary Professors:* M. Holl, Anatomy; F. Schauta, Obstetrics and Gynæcology; A. Tschurtschenthaler, General Pathology and Pharmacology; M. von Vintschgau, Physiology; F. Schoot, Pathological Anatomy; C. Nicoladoni, Surgery; I. Schnabel, Ophthalmic Surgery; P. von Rokitansky, Medicine; W. Löbisch, Medical Chemistry. *Extraordinary Professors:* F. Wildner, Veterinary Medicine; J. Oellacher, Histology and Embryology; E. Lang, Syphilology and Dermatology; M. Dietl, Experimental Pathology.

The ordinary laboratories, clinics, and other means of practical instruction, are possessed by this University. There are a general hospital (204 beds) and a lying-in hospital (130 beds).

UNIVERSITY OF KLAUSENBURG.

THE Medical Faculty of this University consists of the following professors. *Ordinary Professors:* L. Davida, Anatomy; F. Klug, Physiology; A. Genersich, Pathology; (vacant) Pharmacy; S. Purjesz, Medicine; J. Brandt, Surgery; A. Szilágyi, Ophthalmic Surgery; J. Maizner, Obstetrics;—Bélky, Forensic Medicine; E. Geber, Diseases of the Skin and Syphilis; — Rószahegyi, Hygiene. *Extraordinary Professor:* J. Ossikovsky, Chemistry and Toxicology.

UNIVERSITY OF PRAGUE.

THE Medical Faculty of this University consists of the following professors, with several *docents*. *Ordinary Professors:* Th. Eiselt and A. Pribram, Medicine; C. Gussenbauer, Surgery; J. Halla, Medicine; J. Streng, Midwifery; S. Strupi, Veterinary Medicine; J. Hasner von Artha, Ophthalmic Surgery; Ph. Knoll, General Pathology and Therapeutics; J. Maschka, State Medicine; E. Hering, Physiology; F. Weber von Ebenhof, Midwifery; C. H. Huppert, Medical Chemistry; A. Breisky, Obstetrics and Gynæcology; C. Aeby, Anatomy and Histology; H. Chiari, Pathology; J. Soyka, Hygiene. *Extraordinary Professors:* J. Lerch, Forensic, Physiological, and Pathological Chemistry; J. Kaulich, Diseases of Children; S. Mayer, Physiology; P. J. Pick, Skin Diseases and Syphilis; E. Zaufal, Aural Surgery; C. Weil, Surgery; O. Kahler, Special Pathology and Therapeutics; F. Ganghofner, Special Pathology and Therapeutics; A. Ott, Special Pathology and Therapeutics; F. Hofmeister, Pharmacology and Pharmacognosy; A. Epstein, Diseases of Children; W. Biedermann, Physiology.

Connected with the University are an anatomical theatre; pathological, physiological, medico-chemical, and zoo-chemical institutes; medical, surgical, ophthalmic and dermatological clinics (one of the medical clinics being Bohemian); obstetric clinics for practitioners and for midwives, &c. The hospitals are: the General Hospital (948 beds), with the affiliated Hospital of the Bohemian sisters (220 beds); the Franz-Josef Children's Hospital (100 beds); the Israelite General Hospital (52 beds); the Hospital of the Brothers of Mercy (166 beds); the Hospital of the Elizabethan sisters (60 beds): the Public Lunatic Asylum (1,348 beds); the Lying-in Hospital (322 beds for mothers and 176 for children).

SWITZERLAND.

GRADUATION IN MEDICINE.

IN Switzerland degrees in Medicine are granted in the Universities of Basle, Berne, Geneva, and Zürich. These degrees do not confer a licence to practise, for which a separate examination is required.

UNIVERSITY OF BASLE.

THE degree of Doctor of Medicine, Surgery, and Midwifery, granted by this University, can only be obtained with the fulfilment of the following conditions.

1. Application for admission to the examination must be made to the Dean of the Faculty in writing, enclosing: (*a*) A *curriculum vitæ*, (*b*) The academical matriculation of this place, (*c*) Certificates of attendance at the academical lectures, (*d*) A certificate of conduct from the High School in which the candidate has made his principal studies, (*e*) A scientific treatise on any subject he chooses within the sphere of medical or natural science. 2. The examination is party written (*tentamen*) and partly verbal (*rigorosum*). 3. The written examination consists in the answering of five questions having reference to Anatomy, Physiology, Pathological Anatomy and Pathological Physiology, Special Pathology and Therapeutics, and Surgery. 4. In case of rejection the Faculty can appoint a time for a repetition of the examination, before which time the candidate cannot be re-examined. 5. The whole of the professors of the Faculty are invited to the verbal examination. The following are the subjects: Anatomy, Physiology, Pathological Anatomy and Physiology, Special Pathology and Therapeutics, Materia Medica, Surgery, Midwifery. 6. The examination by one examiner must not last longer than half an hour. 7. The degrees in which doctorships are granted are *Summâ cum laude*, *Insigni cum laude*, *Magnâ cum laude*, *Cum laude*, and *Rité's*. 8. In adjudicating on both the written and verbal examination, not only will the special knowledge in the respective branches be taken into consideration, but also the possession of a general scientific knowledge, and especially a comprehensive knowledge of Natural Science. 9. One hundred and twenty copies of the treatise must be delivered to the Faculty. 10. Promotions are not granted to applicants who have not passed the examinations here, but the Faculty can confer the degree of Doctor on notable and eminent physicians *honoris causâ*. 11. The fees for the examination amount to 350 *francs*—viz., 100 for the *tentamen*, 200 for the *rigorosum*, and 50 for the promotion. 12. If the candidate be rejected

after either examination he forfeits the fees. The re-examination is free of charge.

The following are professors in the Medical Faculty of this University. *Ordinary Professors:* F. Miescher (senior), Pathological Anatomy; L. Rütimeyer, Comparative Anatomy and Zoology; A. Socin, Surgery; H. Himmermann, Medicine; J. Kollmann, Anatomy; J. J. Bischoff, Obstetrics and Gynæcology; F. Miescher (junior), Physiology; M. Roth, General Pathology and Pathological Anatomy; L. Wille, Psychiatry; H. Schiess, Ophthalmic Surgery. *Extraordinary Professors:* I. Hoppe, Therapeutics; E. Hagenbach-Burckhardt, Diseases of Children; R. Massini, Polyclinic and Prescribing; A. Burchhardt-Merian, Diseases of the Ear. There are also several private teachers.

Connected with the University are the town hospital, where clinics for medicine, surgery, diseases of the eye, mental diseases, and midwifery are conducted; a hospital for diseases of children, and institutions for practical instruction in physiology, pathology, chemistry, and botany.

UNIVERSITY OF BERNE.

Before admission to examination for the Degree in Medicine and Surgery, the candidate must submit to the Faculty of Medicine a manuscript dissertation of scientific value. If this be accepted, he must, after producing evidence of general, scientific, and medical education, be examined *vivâ voce* in Anatomy, Physiology, Pathological Anatomy, Legal Medicine, General Pathology and Medicine, Surgical Pathology and Surgery, Materia Medica, and Ophthalmology.

The Medical Faculty of this University is constituted of the following professors and about thirteen *docents*. *Ordinary Professors:* C. Emmert, Forensic Medicine and Hygiene; (vacant), Human and Comparative Anatomy; T. Kocher, Surgery; T. Langhans, Pathological Anatomy; L. Lichtheim, Medicine; P. Müller, Obstetrics and Gynæcology; A. Vogt, Hygiene; E. Pflüger, Ophthalmic Surgery; M. von Nencki, Physiological Chemistry; B. Luchsinger, Experimental Pharmacology and Toxicology. *Extraordinary Professors:* E. Schärer, Psychiatry; R. Demme, Diseases of Children. There are several private teachers.

Medical, surgical, obstetric, and special clinics, and physiological, pathological, and clinical laboratories, &c., are connected with the University.

UNIVERSITY OF GENEVA.

The University of Geneva grants the degree of Bachelor in Medical Science and Doctor of Medicine.

The following classes of persons are admitted as students in the Faculty of Medicine: 1. Bachelors in Letters; 2. Bachelors in Science; 3. Students who have attended during two years' lectures in the Section of Philosophy, and have undergone the examinations at the end of each year; 4. Pupils from the Classical Section of the Gymnasium, with certificates of Studies; 5. Swiss and strangers who give evidence of their studies by means of diplomas or certificates; 6. Persons who undergo satisfactory oral examinations in the subjects comprehended in the classical section of the Gymnasium; 7. Persons who furnish evidence that they have studied abroad, for a year at least in a corresponding faculty, may be inscribed in the Faculty of Medicine.

The course of study is as follows: *First Year: Winter Session:* Botany (first part); Physics (first part); Comparative Anatomy or Zoology; Inorganic Chemistry; Practical Comparative Anatomy. *Summer Session:* Botany (second part); Physics (second part); Comparative Anatomy or Zoology; Organic Chemistry (first part); Practical Chemistry; Botanical Excursions. *Second Year: Winter Session:* Descriptive Anatomy (first part); Physiology (first part); Organic Chemistry (second part); Dissections. *Summer Session:* Descriptive Anatomy (second part); Physiology (second part); Practical Chemistry and Practical Comparative Anatomy. (Students are recommended to attend in addition, courses of other subjects, such as Astronomy, Geography, Physics, Mineralogy, Geology, &c.) *Third Year: Winter Session:* Descriptive Anatomy (third part); Normal Histology; Dissection. *Summer Session:* Regional Anatomy; Embryogeny. Supplementary courses on subjects of the preceding years, on which the student's knowledge is weak; Practical Physiology, Histology, Comparative Anatomy, and Chemistry. (The examination for Bachelor in Medical Sciences is now undergone.) *Fourth Year: Winter Session:* General Pathology; Internal Pathology; External Pathology; Dissection of Regions; Medical and Surgical Hospital Practice. *Summer Session:* Special Pathological Anatomy; Pathological Histology; Internal Pathology; External Pathology; Pharmacology; Medical and Surgical Hospital Practice; Exercises in the Laboratory of Pathological Histology. *Fifth Year: Winter Session:* Therapeutics; Hygiene; Legal Medicine; Theory of Obstetrics; Internal Pathology; External Pathology and Operations; Medical and Surgical Hospital Practice. *Summer Session:* Therapeutics; Legal Medicine; Internal Pathology; External Pathology; Medical and Surgical Hospital Practice; Operations. *Sixth Year: Winter and Summer Sessions:* Medical, Surgical, and Obstetrical Hospital Practice; Polyclinic; Ophthalmology; Psychology, &c. Repetitions preparatory to the examination for the Doctorate.

Persons who have satisfied the conditions laid down regarding the admission of students to the Faculty of Medicine may become candidates for the degree of Bachelor in Medical Science. Students who have undergone the recognised annual examinations in the Faculty of Medicine or of Sciences are exempt from oral examination in the subjects in which they have already been examined; provided that the examinations have been undergone not more than two years previously. Persons who produce diplomas or certificates giving evidence of their studies may be exempted from further examinations in the subjects in which they have already passed.

The following may become candidates for the degree of Doctor of Medicine: 1. Bachelors in Medical Science; 2. Persons who produce diplomas or certificates indicating that they have gone through an equivalent course of study. There are five examinations for the degree of Doctor of Medicine. *First Examination:* Human Anatomy and Histology; Physiology; Pathological Anatomy and General Pathology; a Necropsy, for which one hour is allowed; making an Anatomical Preparation, for which four hours are allowed. *Second Examination:* Medicine; Surgery; Operative Surgery; three Operations, and Application of Bandages. *Third Examination:* Hygiene; Therapeutics; Materia Medica and Phar-

macology ; Legal Medicine ; a Medico-Legal Report on a real or supposed case, for which one hour is allowed. *Fourth Examination:* Clinical Examination of two medical and two surgical patients and of one case of labour (fifteen minutes being allowed for each case) ; Obstetrics, with operations on the mannikin ; Discussion on each Clinical Case ; Written Commentary on a Medical and a Surgical Case, two hours being allowed. *Fifth Examination:* Defence of a Printed Dissertation, in the French language, on a subject in medical science chosen by the candidate, and previously communicated to the Faculty.

The examinations are public. Those for the degree of Bachelor are held at the beginning and end of the University year, and in the interval between the sessions. Application for admission must be made to the Dean of Faculty of Medicine eight days before the day of examination. The examinations for the degree of Doctor take place, on the demand of the candidates, at times determined by the Faculty.

Before being admitted to examination, each candidate pays to the beadle 40 *francs;* and after the last examination, 100 *francs* must be paid to the Faculty of Medicine. In case of unsatisfactory examination, half the first fee is returned, and the second is not paid.

UNIVERSITY OF ZURICH.

THE following are the regulations for the degree of Doctor of Medicine.

1. In order to obtain the degree of Doctor of Medicine, the candidate must send to the Dean a written memorial, accompanied by (*a*) evidence of attendance on lectures of Physics, Chemistry, Botany, Zoology, and Medical Subjects : (*b*) a dissertation on some subject in medical science, which, after approval, the candidate must have printed at his own expense.

2. The dissertation is delivered by the Dean for examination to the teacher of the subject of which it treats, or to the member of the Faculty at whose suggestion it has been composed. A recommendatory opinion of the first examiner decides its acceptance ; in this case, his name appears on the title when it is printed. If the first opinion be doubtful or unfavourable, the thesis must be circulated among all the members of the Faculty, and is only accepted if two-thirds of them give their written votes in its favour.

3. When the dissertation is approved, the candidate is admitted to examination for the degree. The first part is written, and the candidate has to answer two questions drawn by lot, one on Anatomy and Physiology, the other on Pathology and Therapeutics, Surgery, or Midwifery. The answers are circulated among the members of the Faculty, who, after examining them, express in writing their determination (by a simple majority) whether the candidate shall be admitted to the second (oral) examination. The oral examination comprises the above-named subjects, and also General Anatomy, Pathological Anatomy, Materia Medica, and Ophthalmic Medicine. The votes of two-thirds of the members of the Faculty present is necessary for the passing of this examination.

4. After the examination has been passed and two hundred printed copies of the dissertation have been delivered, an official diploma is delivered in duplicate to the candidate ; all other ceremonies are dispensed with.

5. The fee consists of 350 *francs* (£14), and 15 *francs* to the bedell ; it is paid before the oral examination (if this be remitted, before graduation). There is no additional fee if it be necessary to repeat the examination. The fee is not returned if the candidate be definitely rejected. The sum of 100 *francs* is remitted to candidates who already possess a recognised diploma ; and, in such cases, the Faculty may, by a majority of two-thirds, agree to omit the oral examination.

6. The Faculty has the power of granting the diploma of doctor *honoris causâ* for distinguished services to medicine.

The Medical Faculty consists of the following Professors, with several *docents : Ordinary Professors :* H. Meyer, Human Anatomy ; H. Frey, Histology ; U. Krönlein, Surgery ; Physiology ; E. Klebs, Pathology ; H. Eichhurst, Medicine ; F. Horner, Ophthalmic Surgery ; O. Wyss, Medicine ; E. Frankenhäuser, Obstetrics and Gynæcology ; A. Forel, Psychiatry. *Extraordinary Professor:* H. Spondly, Obstetric Medicine.

THE LICENCE TO PRACTISE MEDICINE.

THE following are the regulations for the licence to practise medicine in Switzerland. One licensing body examines at Geneva, and the other at Basle, Berne, and Zürich ; both have the same regulations, and grant the licence to practise in all parts of the republic.

There are two examinations, preliminary and final. At Geneva candidates are admitted to the preliminary examination on producing one of the following certificates : 1. Bachelier ès lettres ; 2. Bachelier ès sciences ; 3. Certificates of having passed two examinations in the Section of Philosophy at Geneva, and of having previously taken not less than twenty hours per week of studies ; 4. Certificates of foreign studies at the Classical Section of the Gymnasium at Geneva ; 5. Certificates of foreign studies equivalent to those named above. At the Amalgamated Board of Basle, Berne, and Zürich, candidates must produce evidence of complete and satisfactory studies in a public school ; and of attendance on courses of Anatomy, Chemistry, Physics, Physiology, Practical Physiology, and six months' work in a Chemical Laboratory.

The examination is written and oral. The written part consists in producing two dissertations, one in Physics or Chemistry, the other in Anatomy or Physiology. The oral examination comprises Botany, Zoology, and Comparative Anatomy, Physics, Anatomy, and Physiology. At Geneva, candidates who have passed this examination are entitled to the designation of Bachelor of Medical Science.

In order to be admitted to the Final Examination for the Licence, candidates at Geneva must produce the certificate of Bachelor of Medical Science, and diplomas and certificates obtained after equivalent studies and examinations elsewhere. At the other Board, they must produce evidence of having passed the Preliminary Examination, and of having attended the following academic courses : Pathological Anatomy, Medicine, Practical Surgery and Bandaging (six months), Clinical Medicine and Clinical Surgery (each three sessions), Clinical Midwifery (two

sessions), and Clinical Ophthalmic Medicine (one session).

The examination is written, practical, and oral. The written and practical part consists of—1. Examination of two Medical and two Surgical cases, and one of Midwifery, in the presence of two examiners; 2. Written opinion of one of two Medical and two Surgical cases; 3. A *post mortem* Examination, and opinion on the same; 4. Performance of two Operations: one the tying of an artery; the other according to the judgment of the examiners. The *vivâ voce* examination comprises: 1. General Pathology and Pathological Anatomy; 2. Special Pathology and Therapeutics; 3. Hygiene; 4. Pharmacology; 5. Surgery; 6. Topographical Anatomy, with Operations; 7. Ophthalmology; 8. Midwifery; 9. Ordinary Medical Practice.

DENMARK.

MEDICAL EDUCATION AND GRADUATION.

The study of Medicine at the University of Copenhagen is open to any student who has matriculated there or in foreign Universities; but only Danish subjects can obtain through examination the right to practise as medical men in the country.

The course of study is divided into three parts, namely, an introductory and two principal courses.

1. The introductory part consists of Botany (with especial regard to medicinal plants), Physics, Zoology, and Chemistry, theoretical and practical. The student has to submit to a preliminary examination on these subjects, and he can then enter as a pupil of one of the hospitals, where he must attend in a fixed order, and for a certain time, the various wards.

2. The second course comprises Anatomy, Physiology, Pharmacology, and Dissections, in which the student has to submit to an examination.

3. The final course consists of the following: Theoretical Surgery, Clinical Surgery, Operative Surgery, Theory of Medicine, Clinical Medicine, Pathological Anatomy, General Pathology, Forensic Medicine, and Obstetric Medicine. The student is examined on these subjects, and has to present a written thesis in Medicine, and one on Surgery. Before the student can pass his examination in this concluding course, he must present a certificate showing that he has gone through a half-yearly Clinical course of study under the chief Physicians at the hospital in Surgery, Medicine, Skin-Diseases, and Syphilis; and a shorter course at the Lying-in Institution in Obstetrics and Diseases of Children.

When these examinations are taken, the obligatory course of study is concluded by a residence at the Lying-in Institution, in order to obtain a practical knowledge of operations in cases of abnormal labours. The candidate who has passed his examination has now a right to practise medicine; but the majority of candidates, before commencing to practise, endeavour to obtain an appointment at one of the hospitals, where they do duty during two years in a subordinate position. The entire course of study generally covers a period of from six to seven years.

In order to obtain the degree of Doctor of Medicine, the candidate has to prepare and submit to the Medical Faculty a treatise on a medical subject chosen by himself. If it be accepted by the Faculty, it is printed, and must be defended by the author publicly at the University, when at least two professors of the Medical Faculty appear as opponents. At most only about 10 per cent. of the medical men in Denmark endeavour to obtain this degree.

Among other means for aiding the labours of the student at the University are: The Botanical Gardens, a Zoological Museum, a Chemical Laboratory, a Collection of Physical Instruments, an Anatomical Museum, Dissecting Rooms (Physiological Collection and Laboratory), Pharmacological Collection, Collection of Surgical Instruments, Pathological Museum, the Copenhagen Hospitals, and the Lying-in Institution.

No entrance fees are demanded, and all the lectures are free to the students. The fees payable in respect of the several examinations amount in all to 60 *kroner* (about £3 10*s*.). The expenses in connection with obtaining the degree of Doctor of Medicine amount to 160 *kroner* (about £9).

SWEDEN.

MEDICAL EDUCATION.

There are three medical institutions in Sweden which confer licences to practise, viz., in the Universities of Upsala and Lund, and the Karolina Medico-Chirurgical Institute or Academy of Medicine in Stockholm. The Universities also confer the degree of Doctor of Medicine. A Medical School, with professors of the various branches of medical science, is connected with each.

The three institutions possess museums of normal and pathological anatomy, collections of chemical and pharmaceutical preparations and drugs, of surgical and obstetric instruments, physiological and pathological laboratories, &c.

Upsala possesses a hospital of 150 beds, which is entirely at the disposal of the University for the purpose of clinical teaching. The professors of medicine and surgery are *ex officio* medical officers of the hospital. Of the 150 beds, 100 or a few more are generally occupied, and are divided among medical, surgical, syphilitic, and obstetric cases.

In Lund, clinical instruction is given in the State Hospital and also in the University Hospital. In the latter there are 80 beds for medical and 80 for surgical cases, with 67 beds in the syphilitic and 8 in the obstetric departments. Of these, 40 beds in the medical and 40 in the surgical department are appropriated to clinical instruction. The obstetric department is also clinical. Clinical instruction in the diseases of the eye is also given.

In Stockholm, the pupils of the Karolina Institution receive clinical instruction at the Seraphim Hospital, the Children's and Lying-in-Hospitals, the Town and State Lock Hospital, and the Lunatic Asylum at Konradsberg.

At the Seraphim Hospital there are two medical and two surgical wards, under the charge of the ordinary and adjunct professors of medicine and surgery; and also a small gynæcological ward. It contains about 300 beds. An ophthalmic clinic is

comprised in the surgical department; and the gynæcological clinic is attached to the medical.

The Lying-in Hospital or Obstetric Clinic can accommodate 30 patients; 20 beds are generally occupied. The professor of obstetrics in the Karolina Institution is *ex-officio* chief physician.

The whole of the cases in the General Orphan Hospital are available for clinical instruction. The daily number of infants under one year old in the institution is from 100 to 200; sometimes it has been as high as 240. Of these 10 or 12 per cent. are generally on the sick-list. There are also about 80 children between one and fifteen years of age. In addition, from 1,600 to 2,000 are attended yearly as out-patients. Clinical instruction is given by the professor of diseases of children for eight months in the year, and four months by his adjunct.

The Town and State Lock Hospital has 180 beds, of which, on an average, 140 are occupied daily.

The Hospital for the Insane at Konradsberg has 220 beds, which are all available for clinical instruction. The professor of psychological medicine in the Karolina Institute is the chief physician.

LICENCE AND DEGREE IN MEDICINE.

No one can practise Medicine in Sweden who has not obtained a licence from one of the three Boards. The examinations for the licence consist of two parts. The first, for the Diploma of Candidate in Medicine (analogous to *Officier de Santé* in France), embraces Anatomy, Physiology, Medical Chemistry, Pharmacology, General Pathology, and History of Medicine. The candidate must, after passing the maturity examination on leaving a lyceum, have undergone a preliminary (medico-philosophical) examination in Botany, Zoology, Chemistry, and Physics, or have passed an examination as candidate in Philosophy. He must also have followed the practical laboratory courses of Chemistry, Physiology, and normal and morbid Anatomy. The examination for the licence comprises Medicine, Diseases of Children, Surgery, Obstetrics and Gynæcology, Pathological Anatomy, and Forensic Medicine. The candidate must have passed the examination for Candidate in Medicine, and must subsequently have attended the clinics of Medicine, Surgery, Obstetric Medicine, Diseases of Children, Syphilis, and Diseases of the Mind; and must have obtained a competent knowledge of Pharmacy. Attendance on oral lectures is not obligatory.

The degree of Doctor of Medicine is conferred by the Universities of Lund and Upsala on Licentiates of those Universities and of the Academy at Stockholm, on their presenting and defending a thesis. Attendance on lectures is obligatory for the Degree.

NORWAY.

MEDICAL EDUCATION.

IN the University of Christiania, which is the only School of Medicine in Norway, lectures are delivered on the following subjects: Surgery, Ophthalmic Surgery, Physiology, Midwifery and Diseases of Women and Children, Descriptive Anatomy, Forensic Medicine, Pathology, and Therapeutics, Hygiene, Materia Medica, General Pathology and Pathological Anatomy, Surgical Pathology, Zoology, and Chemistry. Clinical instruction is given in the General Hospital on Surgery, Ophthalmic Surgery, Medicine, Diseases of the Skin and Syphilis; at the Lying-in and Children's Hospital, on the Diseases of Women and Children; at the Ganstead Asylum and at the Christiania Lunatic Asylum, on Mental Diseases; and in the Town Hospital, on Chronic Diseases. Practical instruction is also given in Chemistry, Anatomy, and Botany.

LICENCES AND DEGREES.

Before entering on the study of Medicine, the candidate has to pass two preliminary examinations: one in Arts, including Norwegian, Latin, Greek, French, German, English, Mathematics, Geography, and History; and one in Philosophy, including Geometry, Zoology, Botany, Astronomy, and the elements of Chemistry and Physics. Having passed these, he is admitted to matriculation, and afterwards studies Medicine nearly seven years.

There are three professional examinations. The first is held two and a half years after Matriculation, in Anatomy, Dissections, the use of the Microscope, Physiology, and Medical Physics. The second, held three and a half years after the first, includes Pharmacology, Toxicology, Medicine, Therapeutics, General Pathology, Pathological Anatomy, Surgery, Operative Surgery, Obstetrics and Gynæcology, Diseases of Children, Forensic Medicine, Hygiene, and a Practical Examination in Medicine and Surgery. Practical work in the Hospital Wards is also obligatory.

On passing the final examination, the candidate becomes a Physician, and obtains the right to practise. To obtain the degree of Doctor, he must pass a further examination, and defend a thesis.

HOLLAND.

DEGREE OF DOCTOR OF MEDICINE.

THE degree of Doctor of Medicine is granted in Holland by the Universities of Groningen, Leyden, and Utrecht. Candidates for matriculation must produce evidence of gymnasial maturity, or undergo an equivalent examination. The course of study, including laboratory work and hospital practice, extends over six years. The final examination embraces all the subjects of medical study and the presentation and defence of a thesis. The degree does not grant a licence to practise.

STATE EXAMINATION.

This examination is conducted by eight professors, appointed annually and paid by the Government. The applicant for admission must be a Doctor of Medicine of some University, or possess a certificate of gymnasial maturity, or pass a preliminary literary and philosophical examination. The course of medical study must extend over at least six terms. The medical examination includes General and Special Pathology, Pharmacology, Morbid Anatomy, Medical Jurisprudence, Clinical Medicine, Clinical Surgery, and Obstetrics.

BELGIUM.

GRADUATION IN MEDICINE.

Degrees in Medicine are granted by the Universities of Brussels, Ghent, Liège, and Louvain. The Universities of Brussels and Louvain confer only scientific titles, without licence to practise; the degrees of the other two, when legalised by a Government commission, give the right of practice in Belgium.

UNIVERSITY OF BRUSSELS.

By the regulations of the University of Brussels, British and other medical practitioners, provided with proper qualifications, are admitted to examination before the Faculty for the degree of M.D. Residence is not required from such as are unable to absent themselves long by reason of their professional occupations.

Candidates must come in person and have their names inscribed in the books of the University. The fees are: for inscription of name, 215 fr. (£8 12*s.*); for examination, 315 fr. (£12 12*s.*); for registration of diploma, 10 fr. (8*s.*); total, 540 fr. (£22 12*s.*). The examination consists of three parts. 1. General Therapeutics, including Pharmaco-dynamics (proportion of doses), Special Pathology and Therapeutics of Internal Diseases, General Pathology, and Pathological Anatomy. 2. Surgical Pathology, Ophthalmic Surgery, Theory of Midwifery, Public and Private Hygiene, Medical Jurisprudence. Examination at the Hospital of one or two patients under Medical and Surgical Treatment; Examination in Midwifery, consisting in Obstetrical Operations on the *mannequin* (model of pelvis); Examination in Operative Surgery, consisting of some of the usual operations on the dead subject, such as amputation, ligature of an artery, &c.

Great importance is attached to practical knowledge, but candidates must also prove that they possess positive theoretical science.

Examinations take place at any time between October 15 and June 20, except during Christmas and Easter. They are *vivâ voce* and written, but candidates may be exempted from the former, and confine themselves to the written tests by paying an additional fee of £1 for each test. Candidates must exhibit their qualifications or diplomas.

The three examinations may be got through in a week, allowing a day's interval between each two tests. Saturday is the most eligible day for arriving for candidates for whom time is an object. The delay of a week is, however, never exceeded by more than a day or two.

The examinations are conducted in English through the medium of an interpreter, for such candidates as are not familiar with the French language.

Candidates who are not foreign qualified medical men must undergo the above-mentioned examinations, and also an examination in Anatomy, Physiology, and Histology, and must produce a degree in Arts or Science from a recognised University, or pass a preliminary examination; they must also have attended for five years the lectures in a medical college, or for three years the medical and surgical practice of a hospital.

UNIVERSITY OF GHENT.

A candidate for matriculation at this University must be a graduate in Arts of some University, or must pass a preliminary examination. He must then attend for two years a scientific course, including Psychology, Chemistry, Physics, Botany, Zoology, and Mineralogy, and at the end of the time pass an examination in these subjects. After this, he must attend lectures for five years, and hospital practice for three years.

The following examinations must be passed: 1. At the end of the second year of medical study, in Descriptive Anatomy, Histology, Physiology, Pharmacology, and Comparative Anatomy; 2. At the end of the fourth year, in General Pathology, Therapeutics, Theory and Practice of Medicine, and Morbid Anatomy; 3. At the end of the fifth year, in Theory and Practice of Surgery and in Obstetrics. The final examination for the Doctorate includes the general subjects of medical study, with practical examinations in Clinical Medicine, Clinical Surgery, Obstetrics, and Operative Surgery. Candidates who have attended the requisite lectures and hospital practice elsewhere are admitted to the final examination if they possess a degree in Arts or pass the matriculation examination of the University.

UNIVERSITY OF LIÈGE.

The University grants a degree in Medicine, Surgery, and Midwifery, which can only be obtained after passing three examinations, in the French language, in natural sciences and medical subjects.

The first examination includes the following subjects: General Chemistry, Logic, Psychology, Moral Philosophy, Experimental Physics, Elements of Zoology, Elements of Botany (comprising the medical category), Elemental Geology and Mineralogy. This is called the examination for candidates in natural sciences.

The second examination, which is for candidates in Medicine, includes elements of Comparative Anatomy, Descriptive and Regional Anatomy, Human Physiology, and Pharmacology.

The third examination, which, when successfully passed, entitles the candidate to the Doctorate, includes the following subjects, viz., General Pathology, Pathological Anatomy, Special Pathology and Therapeutics, Mental Maladies, General Therapeutics, Surgical Pathology and Ophthalmology, Theory and Practice of Midwifery (including operations), Public Hygiene, Legal Medicine, Clinical Medicine, Clinical Surgery, Surgical Operations.

The fees are, for the first examination, 80 *fr.*; second, 40 *fr.*; Doctor in Medicine, 240 *fr.*; total, 300 *fr.*, or about 15*l.*

UNIVERSITY OF LOUVAIN.

This University, before granting the usual degree, insists upon compliance with the following conditions—viz.: 1. An examination in one group (or branch) of the Sciences, Mathematics, Physico-chemics, or Natural Sciences; 2. An examination upon all medical subjects in the French language.

Candidates for the degree of Doctor must have studied medicine five years at a recognised medical college or university, and have attended hospital practice for three years at a recognised hospital.

The University of Louvain consists of several colleges and the buildings of the Halles, and contains a library of 70,000 volumes.

ITALY.

THE Italian Universities at which degrees in medicine are granted are the Royal Universities of Bologna, Cagliari, Catania, Genoa, Messina, Modena, Naples, Padua, Palermo, Parma, Pisa, Rome, Sassari, Siena, and Turin; the free Universities of Camerino and Perugia, and the Royal Institute for Superior Studies at Florence. There is also a preparatory School of Medicine at Ferrara.

The regulations for graduation in medicine in the Universities of Italy are as follows.

1. The Medico-Chirurgical Faculty has the duty of giving instruction in all subjects relating to medicine and surgery, promoting the cultivation of all that is known in that field, and qualifying for the exercise of the medical profession in its various branches. 2. The course of medical and surgical study extends over six years, at the end of which free licence to practise is granted. 3. The following courses of instruction are obligatory: General Chemistry, Organic and Inorganic; Botany; Zoology, with Comparative Anatomy and Physiology; Experimental Physics; Normal Human Anatomy (*i.e.* Histology, Descriptive and Topographic Anatomy, and Dissection); Human Physiology; General Pathology; Pathological Anatomy (demonstrations and exercises); Materia Medica and Experimental Pharmacology; Special Medical Pathology (or Principles and Practice of Medicine); Special Surgical Pathology (Surgery); Clinical Medicine and Exercises in Semeiotics; Clinical and Operative Surgery; Theory and Practice of Ophthalmic Surgery; Theory and Practice of Diseases of the Skin and Syphilis; Midwifery and Clinical Midwifery; Forensic Medicine and Public Hygiene; Theoretical and Clinical Psychiatry (where opportunities exist). 4. The obligatory courses must each be attended one year; except Pathological Anatomy, of which two years are required, and Human Anatomy and Clinical Medicine and Surgery, each three years. 5. The following courses are non-obligatory or complementary; Medical Chemistry; Experimental Toxicology; Critical History of Medicine. 6. Besides these, other free courses may also be given. 7. There shall be three biennial examinations in the Faculty of Medicine; the first for 'promotion'; the second for 'licence'; the third for the degree of 'laureate,' with a diploma conferring full licence to practise. 8. In the Universities of Pisa and Siena the licentiate shall have the title of laureate of the first stage (*laurea di primo grado*). 9. In order to be admitted to the first examination (*promozione*) the candidate must have been a student at the University at least two years, and have diligently attended the Courses of Chemistry, Botany, Zoology, Comparative Anatomy and Physiology, Experimental Physics, Human Anatomy, and any subjects of instruction that he may choose, so as to make up eighteen hours of instruction per week. 10. The subjects of examination shall be Chemistry, Botany, Zoology, Comparative Anatomy and Physiology, and Experimental Physics. The Examining Board shall consist of the official teachers of the subjects of examination, with one or two additional examiners not belonging to the teaching body. On the proposal of the Faculty, and with the consent of the Minister, the examination for promotion may be divided into two parts, one to be held at the end of the first year, and the other at the end of the second year. At the beginning of each scholastic year, the Faculty shall determine what courses are to be followed and when. 11. The candidate for admission to the several examinations (licence) must have passed the first examination, have attended the University during two other years, and have diligently attended courses of Human Anatomy and Physiology, General Pathology, Practical Pathological Anatomy, Materia Medica and Experimental Pharmacology, Special Medical Pathology, Special Surgical Pathology, Clinical Medicine, and Clinical Surgery. 12. The Examining Board shall be composed of the official teachers of the subjects mentioned, with one or two assessors not belonging to the teaching body. The examination shall be oral, and practical as regards Human Anatomy and Materia Medica. 13. A candidate for admission to the third examination (*laurea*) must have passed the second examination, have subsequently been a student at the University during two years, and have diligently attended the courses of Clinical Dermatology and Syphilology, Clinical Ophthalmic Surgery, Midwifery and Clinical Midwifery, Clinical Psychiatry, Exercises in Pathological Anatomy, Clinical Medicine and Surgery, Operative Surgery, Forensic Medicine and Hygiene, and voluntary courses so as to make up eighteen hours of instruction each week. 14. The candidate has to undergo an examination on the dead body and two clinical examinations. 15. The examination on the dead body shall be conducted by a subcommittee consisting of all the professors of Operative Surgery, Pathological Anatomy, and Forensic Medicine, with one or two assessors not belonging to the official teaching body. 16. In this examination, the candidate will perform on the dead body a surgical operation, the nature of which will be decided by lot from a series prepared by the subcommittee. He will also perform a necropsy, and draw up a description of the appearances seen. Finally, he will answer the questions put to him by the examiners, and especially on the results of the necropsy, which are asked by the professor of forensic medicine. 17. The first clinical examination will be conducted in the presence of a subcommittee consisting of the professors of Clinical Dermatology and Syphilology, Clinical Obstetrics, Clinical Psychiatry, Clinical Ophthalmology, and Forensic Medicine, with one or two extra-professorial assessors. 18. In this examination the candidate will examine four cases of diseases selected from the four special classes which have not previously been examined or treated in the clinical wards, and will give his opinion on the diagnosis, prognosis, and treatment. He will afterwards answer the questions and observations of the examiners, and especially will reply to the questions put by the professor of Forensic Medicine on the obstetric and psychological cases. 19. The several clinical examinations shall be conducted in the presence of a subcommittee, consisting of the Professors of Clinical Medicine, Clinical Surgery, Medicine, Surgery, and Forensic Medicine, with one or two extra-professorial assessors. 20. The candidate shall examine, in the presence of the subcommittee, four patients, two medical and two surgical, who have not yet been examined or treated in the wards, and shall write a description of the cases. He shall, finally, answer the questions asked by the examiners. 21. A student must have passed each stage of the third examination before he can be admitted to the next stage. 22. In each examination, a student rejected in one subject alone may

present himself for examination in this subject only on a future occasion: but if he be rejected in two or more subjects, the whole examination must be repeated. 23. The three stages of the third examination having been passed, the three subcommittees unite to form a committee, presided over by the President of the Faculty, and will judge of the merits of the candidates. The successful candidates will be declared Doctors in Medicine and Surgery, and the president will refer them to the Rector, in order that they may receive the diploma of laureate.

Foreigners desirous of obtaining medical degrees in Italian Universities must produce a diploma or degree obtained at some noted foreign University, and must at the same time produce satisfactory proof that they have actually gone through all the studies and passed the examinations required for that degree. They must also pass the ordinary examinations for the medical degree, and pay the respective fees. The examinations are usually conducted in the Italian or the Latin language.

UNITED STATES OF AMERICA.

The United States possess a very large number of institutions empowered by charter to grant the degree of doctor of medicine; these being in some instances special colleges and schools of medicine and surgery, and in others the medical departments of universities. The subjoined is a list of them. There are also several eclectic and homœopathic colleges, which are not included in the list.

Alabama.—Medical College of Alabama (Mobile).

Arkansas.—Medical Department of Arkansas Industrial University (Little Rock).

California.—Cooper Medical College (San Francisco): Medical Department of the University of California (San Francisco).

Colorado.—Medical Department of the University of Denver: Medical Department of the University of Colorado (Boulder).

Connecticut.—Medical Department of Yale College (New Haven).

District of Columbia.—National Medical College, Columbian University (Washington): Medical Department of the University of Georgetown (Washington): Medical Department of Howard University (Washington).

Georgia.—Medical College of Georgia (Augusta): Atlanta Medical College: Southern Medical College (Atlanta).

Illinois.—Rush Medical College (Chicago): Chicago Medical College: Women's Medical College (Chicago): Quincy College of Medicine.

Indiana.—Medical College of Evansville: Physio-Medical College of Indiana (Indianopolis): Indiana Medical College (Indianopolis): Medical College of Fort Wayne: Central College of Physicians and Surgeons (Indianopolis): Hospital Medical College of Evansville.

Iowa.—College of Physicians and Surgeons (Keokuk): Medical Department of the State University (Iowa City): Iowa College of Physicians and Surgeons (Desmoines).

Kentucky.—Medical Department of the University of Louisville: Kentucky School of Medicine (Louisville): Louisville Medical College: Hospital College of Medicine (Louisville).

Louisiana.—Medical Department of the University of Louisiana (New Orleans).

Maine.—Medical School of Maine at Bowdoin College.

Maryland.—University of Maryland (Baltimore): College of Physicians and Surgeons (Baltimore): Baltimore Medical College: Women's Medical College (Baltimore).

Massachusetts.— Harvard University (Boston): College of Physicians and Surgeons (Boston).

Michigan.—Department of Medicine and Surgery, University of Michigan (Ann Arbor): Detroit Medical College: Michigan College of Medicine (Detroit).

Minnesota.—Minnesota College Hospital (Minneapolis): Medical Department of the University of Minnesota (Minneapolis).

Missouri.—Medical College of the University of Missouri (Columbia): Missouri Medical College (St. Louis): St. Louis Medical College: Kansas City Medical College: St. Louis College of Physicians and Surgeons: North-Western Medical College of St. Joseph: Medical Department of the University of Kansas: St. Joseph Medical College.

Nebraska.—Omaha Medical College: Medical Department of the University of Nebraska (Lincoln).

New Hampshire.—Medical Department of Dartmouth College (Hanover).

New Jersey.—Medical Society of New Jersey.

New York.—College of Physicians and Surgeons of the City of New York: Albany Medical College: Medical Department of the University of the City of New York: Medical Department of the University of Buffalo: Long Island College Hospital (Brooklyn): Bellevue Hospital Medical College (New York): College of Medicine of Syracuse University: Women's Medical College (New York): Medical Department of Niagara University.

North Carolina.—Medical Department of Shaw University (Raleigh).

Ohio.—Medical College of Ohio (Cincinnati): Columbus Medical College: Starling Medical College (Columbus): Medical Department of the Western Reserve University (Cleveland): Cincinnati College of Medicine and Surgery: Miami Medical College (Cincinnati): Medical Department of Wooster University (Cleveland): Toledo Medical College: North-Western Ohio Medical College (Toledo).

Oregon.—Medical Department of the Williamette University (Portland).

Pennsylvania.—Medical Department of the University of Pennsylvania (Philadelphia): Jefferson Medical College (Philadelphia): Women's Medical College (Philadelphia): Medico-Chirurgical College of Philadelphia.

South Carolina.—Medical College of the State of South Carolina (Charleston).

Tennessee.—Medical Department of the University of Nashville and Vanderbilt University (Nashville): Medical Department of Central Tennessee College (Nashville): Nashville Medical College: Memphis Medical College: Memphis Hospital Medical College.

Texas.—Texas Medical College and Hospital (Galveston).

Vermont.—Medical Department of the University of Vermont (Burlington).

Virginia.—Medical Department of the University of Virginia (Charlottesville): Medical College of Virginia (Richmond).

UNIVERSITY OF PENNSYLVANIA.

THE Medical Department of this University is the oldest medical school in America, having been established in 1765 by Drs. John Morgan and William Shippen, on the plan of the University of Edinburgh, of which the founders were graduates. The following are the professors of the faculty as at present constituted :—Dr. W. Pepper, Provost of the University and *ex officio* President of the Faculty; Dr. H. H. Smith (Surgery—*Emeritus*); Dr. Joseph Leidy (Anatomy); Dr. Richard A. F. Penrose (Obstetrics and Diseases of Women and Children); Dr. Alfred Stillé (Theory and Practice of Medicine, and Clinical Medicine); Dr. D. Hayes Agnew (Surgery and Clinical Surgery); Dr. William Pepper (Clinical Medicine); Dr. William Goodell (Clinical Gynæcology); Dr. James Tyson (General Pathology and Morbid Anatomy); Dr. Horatio C. Wood (Materia Medica, Pharmacy, and General Therapeutics); Dr. Theodore G. Wormley (Chemistry); Dr. John Ashhurst, jun. (Clinical Surgery); Dr. Harrison Allen (Physiology); also the following clinical professors of special subjects :—Dr. W. F. Norris (Diseases of the Eye); Dr. G. Strawbridge (Diseases of the Ear); Dr. L. A. Duhring (Diseases of the Skin).

The curriculum is arranged as follows :—*First Year:* Anatomy, Histology, Materia Medica and Pharmacy, General Chemistry, Physiology, General Pathology, General Clinics—Medical and Surgical. Final Examinations in General Chemistry, Materia Medica, and Pharmacy. *Second Year:* Anatomy, Topographical Anatomy, Medical Chemistry, Physiology, General Pathology and Morbid Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, General Clinics—Medical and Surgical. Final examinations in Anatomy, Medical Chemistry, and Physiology. *Third Year:* General Pathology and Morbid Anatomy, Topographical Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, Operative Surgery, Minor Surgery and Bandaging, Diseases of Women and Children; Gynæcology, Bedside Instruction in Practical Medicine (including Physical Diagnosis), Bedside Instruction in Practical Surgery, Practical Ophthalmology, Practical Otology, Practical Dermatology, Practical Electro-Therapeutics, General Clinics—Medical and Surgical. Special Clinics (Nervous Diseases, Diseases of Skin, Eye, Ear, Diseases of Women and Children). Final examinations for degree at the end of the course. General Pathology and Morbid Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, and Diseases of Women and Children. Opportunities for practical work in the physiological laboratory will be afforded to those who desire them. A separate fee is charged.

No beneficiary students are received, nor students at reduced rates, except in the case of the six successful applicants for the scholarships created by the board of trustees. These are open to competitive examination. Candidates must furnish satisfactory evidence that they are without the means to defray the expenses of a medical education. They must also write a brief autobiography, which will serve as a test of their qualifications in orthography and grammar; and pass an examination in a Latin prose translation (first three books of Cæsar), and an examination in elementary physics. This examination is held annually in September.

The Faculty have established a post-graduate course, which embraces various special departments. The teaching consists in bedside and dispensary lessons, the treatment, examination of patients, and the use of instruments of precision in the diagnosis and treatment of disease.

The Laboratory Building is a spacious building of four floors : the first being devoted to operative dentistry; the second and third are fitted up as chemical laboratories; while the fourth contains apartments for physiological, histological, and pathological investigation. There are also a pharmaceutical laboratory, and one of experimental therapeutics. The attendance of the students upon the laboratory courses is compulsory. Before commencing dissecting the student is obliged to attend the osteo-syndesmological laboratory, in order to make himself familiar with the skeleton. The following are the requirements for graduation.

Students who have attended one course in a regular medical school (homœopathic and eclectic schools are not recognised) will be admitted as students of the second course in the University, after having satisfactorily passed an examination in General Chemistry and Materia Medica and Pharmacy. Students who have attended two courses in a regular medical school will be admitted as students of the third course after having satisfactorily passed an examination in General and Medical Chemistry, Materia Medica and Pharmacy, Anatomy, and Physiology. Graduates of other regular medical schools in good standing will be admitted as students of the third course without an examination. Graduates of Colleges of Pharmacy and Dental Colleges in good standing are admitted to the second course without an examination.

The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years, and be of good moral character. He must have studied medicine for three years, and have attended at least his last course of instruction in this school, have prepared a satisfactory thesis, and have passed the required examinations. Candidates who have not been successful upon a first examination will be permitted to have a second before the June commencement. The commencement for conferring the degree of Doctor of Medicine is held on the 15th day of March, unless that day should fall on a Saturday or Sunday, when it is held on the preceding Friday. The degree will not be conferred upon a candidate who absents himself from the public commencement, except by special permission of the Medical Faculty.

The entire College expenses for the three years' course is 435 dollars, including matriculation and graduation fees.

HARVARD UNIVERSITY, BOSTON.

THE following are the professors and teachers in the Medical Department :—Dr. Charles W. Eliot (President); Dr. H. T. Bowditch (Dean and Professor of Physiology); Dr. Oliver W. Holmes (Anatomy—*Emeritus*); Dr. Henry J. Bigelow (Surgery—*Emeritus*); Dr. Francis Minot (Theory and Practice of Physic); Dr. John P. Reynolds (Obstetrics); Dr. Henry W. Williams (Ophthalmology); Dr. David W. Cheever (Surgery); Dr. James C. White (Dermatology); Dr. Robert T. Edes (Clinical Medicine); Dr. Charles F. Folsom (Assistant, Mental Diseases); Dr. Frederick I. Knight (Assistant, Laryngology); Dr. Charles B. Porter (Assistant, Surgery); Dr.

J. Collins Warren (Assistant, Surgery); Dr. Reginald H. Fitz (Pathological Anatomy); Dr. William L. Richardson (Assistant, Obstetrics); Dr. F. W. Draper (Assistant, Legal Medicine); Dr. E. N. Whether (Assistant, Clinical Medicine); Dr. Edward S. Wood (Chemistry); Dr. William H. Baker (Assistant, Gynæcology). Other instructors are:—Dr. S. H. Durgin (Lecturer on Hygiene); Dr. H. P. Quincy (Instructor in Histology); Dr. F. A. Harris (Demonstrator of Medico-Legal Examinations); Dr. F. C. Shattuck (Instructor in Theory and Practice of Physic); Dr. E. H. Bradford (Assistant in Clinical Surgery); Dr. F. H. Davenport (Assistant in Gynæcology); Dr. G. M. Garland (Assistant in Clinical Medicine); Dr. J. W. Warren (Assistant in Experimental Therapeutics and Physiology); Dr. G. W. West (Demonstrator of Bandaging and Apparatus); Dr. W. W. Gannett (Assistant in Pathological Anatomy); Dr. C. M. Green (Instructor in Obstetrics); Dr. C. S. Minot (Instructor in Histology and Embryology); Dr. F. H. Williams (Instructor in Materia Medica); Dr. W. C. Emerson (Assistant in Chemistry); Dr. W. J. Otis (Assistant in Operative Surgery); Dr. Samuel J. Mixter (Assistant in Anatomy); Dr. C. Harrington (Assistant in Chemistry). The following gentlemen will give special clinical instruction:—Dr. John Homans (Diagnosis and Treatment of Ovarian Tumours); Dr. T. W. Fisher (Mental Diseases); Dr. Francis B. Greenough and Dr. A. Post (Syphilis); Dr. Oliver F. Wadsworth (Ophthalmoscopy); Dr. J. Orne Green and Dr. Clarence J. Blake (Otology); Dr. E. G. Cutler or W. W. Gannett (Auscultation); Dr. J. P. Oliver and Dr. T. M. Rotch (Diseases of Children); Dr. S. G. Webber and Dr. J. J. Putnam (Diseases of the Nervous System); Dr. James R. Chadwick (Gynæcology).

All candidates for admission who hold no degree in arts or science, must pass a written examination on entrance to this School, in English, Latin, Physics, and in any one of the following subjects: French, German, Elements of Algebra or of Plain Geometry, Botany.

Instruction is given by lectures, recitations, clinical teaching, and practical exercises, distributed throughout the academic year. This year begins Sept. 25, 1884, and ends on the last Wednesday in June 1885, and is divided into two equal terms.

Students are divided into four classes, according to their time of study and proficiency, and during their last year will receive largely increased opportunities of instruction in the special branches mentioned. Students who began their professional studies elsewhere may be admitted to advanced standing; but all persons who apply for admission to the advanced classes must pass an examination in the branches already pursued by the class to which they seek admission.

The course of study recommended by the Faculty covers four years, but until further notice the degree of Doctor of Medicine will continue to be given upon the completion of three years of study, to be as ample and full as heretofore. The degree of Doctor of Medicine *cum laude* will be given to candidates who have pursued a complete four years' course, and obtained an average of 75 per cent. upon all the examinations of this course. In addition to the ordinary degree of Doctor of Medicine as heretofore obtained, a certificate of attendance on the studies of the fourth year will be given to such students desiring it as shall have attended the course and have passed a satisfactory examination in the studies of the same.

The order of studies and examinations for the four years' course is as follows: *First Year.*—Anatomy, Physiology, and General Chemistry. *Second Year.*—Practical and Topographical Anatomy, Medical Chemistry, Materia Medica, Pathological Anatomy, Clinical Medicine, Surgery, and Clinical Surgery, *Third Year.*—Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery. and Clinical Surgery. *Fourth Year.*—Ophthalmology, Otology, Dermatology, Syphilis, Laryngology, Mental Diseases, Diseases of the Nervous System, Diseases of Women, Diseases of Children, Obstetrics, Clinical and Operative Obstetrics, Clinical Medicine, Clinical and Operative Surgery, Hygiene, Forensic Medicine. The examinations are held in the following order: End of first year—Anatomy, Physiology, and General Chemistry. End of second year—Topographical Anatomy, Medical Chemistry, Materia Medica, and Pathological Anatomy. End of third year—Therapeutics, Obstetrics, Theory and Practice of Medicine, Surgery. End of fourth year—Ophthalmology, Otology, Dermatology, Syphilis, Laryngology, Mental Diseases, Diseases of the Nervous System, Diseases of Women, Diseases of Children, Obstetrics, Clinical and Operative Obstetrics, Clinical Medicine, Clinical and Operative Surgery, Hygiene, Forensic Medicine.

The order for the three years' course is as follows: *First Year.*—Anatomy, Physiology, and General Chemistry. *Second Year.*—Practical and Topographical Anatomy, Medical Chemistry, Materia Medica, Pathological Anatomy, Clinical Medicine, and Clinical Surgery. *Third Year.*—Therapeutics, Obstetrics. Theory of Practice of Medicine, Clinical Medicine, Surgery, Clinical Surgery, Ophthalmology, Dermatology, Syphilis, Otology, Laryngology, Mental Diseases, Diseases of the Nervous System, Diseases of Women, Diseases of Children, Hygiene, Forensic Medicine. Students following this course are classified as heretofore, and the instruction in the special branches is of the same character as that which has been given for several years. The examinations of the first two years are common to both groups of students. The final examinations at the close of the third year are in the following subjects: Therapeutics, Obstetrics, Surgery, and Clinical Surgery, Theory and Practice, Clinical Medicine.

Examinations in all subjects are also held before the opening of the School.

Every candidate for a degree must be twenty-one years of age; must have studied medicine three or four full years, have spent at least one continuous year at this School, have passed a written examination upon all the prescribed studies of the course taken, and have presented a thesis.

Course for Graduates.—For the purpose of affording to those already Graduates of Medicine additional facilities for pursuing clinical, laboratory, and other studies, in such subjects as may specially interest them, the Faculty has established a course which comprises, in addition to the list of special departments above stated, the following branches: Histology; Physiology; Medical Chemistry; Pathological Anatomy. On payment of the full fee the privilege of attending any of the other exercises of the Medical School, the use of the laboratories and library, and all other rights accorded by the University will be granted. Single branches may also be pursued. Graduates of other Medical Schools

who may desire to obtain the degree of M.D. at this University will be admitted to examination for this degree after a year's study in the Graduates' Course. Examination on entrance is not required.

Fees.—The fees are : for Matriculation, 5 dollars ; for the year, 200 dollars ; for one term alone, 120 dollars ; for Graduation, 30 dollars. For Graduates' course the fee for one year is 200 dollars ; for one term, 120 dollars ; and, for single courses, special fees. Payment is made in advance.

Students of regular standing in any one department of Harvard University have a right to attend lectures, recitations, and examinations in any other departments without paying additional fees.

JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

THE fifty-ninth Session of this College will begin on October 1, and continue till the end of March 1885. The lectures will be delivered by the following professors : Dr. Ellerslie Wallace (Obstetrics and Diseases of Women and Children) ; Dr. Roberts Bartholow (Materia Medica and General Therapeutics) ; Dr. Henry C. Chapman (Institutes of Medicine and Medical Jurisprudence) ; Dr. J. M. Da Costa (Practice of Medicine) ; Dr. W. H. Pancoast (General, Descriptive, and Surgical Anatomy) ; Dr. Robert E. Rogers (Medical Chemistry and Toxicology) ; Dr. S. W. Gross (Principles of Surgery and Clinical Surgery) ; Dr. J. H. Brinton (Surgery and Clinical Surgery) ; Dr. T. Parvin (Obstetrics and Gynæcology) ; Dr. W. Thomson (Ophthalmology).

A spring course of Supplementary Lectures is given, beginning early in April and ending early in June. There is no additional charge for this course to matriculates of the College, except a registration fee of 5 dollars ; non-matriculates pay 40 dollars, 35 of which is, however, credited on the amount of fees paid for the ensuing Winter Course.

To the usual instruction in medical schools, the Faculty of this college have added a thorough system of practical laboratory work. To each course of the regular curriculum there is appended a laboratory course, carried on in large and thoroughly equipped apartments in the college, by specially appointed Demonstrators, under the immediate direction of the Professor. In this way each candidate for the degree of M.D. is immediately and personally taught in obstetrics and gynæcology, physical diagnosis, laryngology, ophthalmology, medical chemistry, pharmacy, materia medica and experimental therapeutics, physiology, histology and experimental physiology, and minor surgery, bandaging, operations on the cadaver, &c.

In the department of medicine, clinical conferences and practical lessons in physical diagnosis give each student familiarity with all forms of disease. This course of instruction is *free of charge, but obligatory upon* candidates for the degree, except those who have had such instruction and those who are graduates of other colleges of ten years' standing.

A *Post-Graduate Course*, very complete in all the details of instruction, has been organised for practitioners only.

Clinical Instruction is given throughout the year at the Hospital of Jefferson College, which accommodates 100 patients.

A candidate for the degree of M.D. must be of good moral character, and at least 21 years of age. He must have studied medicine for not less than three years, and have attended at least two full winter sessions of lectures, one of which must have been in this College. At least one course of Practical Anatomy and one of Clinical Instruction must have been attended ; and he must present a thesis, of his own composition and in his own handwriting, on some medical subject.

No honorary degrees in medicine are granted by this College.

The *Fees* are : for a full Course, 140 dollars ; Matriculation Fee (paid once only), 5 dollars ; Practical Anatomy, 10 dollars ; Graduation Fee, 30 dollars ; for a full course of Lectures to those who have attended two full courses at other recognised Colleges, the Matriculation Fee and 70 dollars ; to Graduates of other Colleges, of less than ten years, the Matriculation Fee and 70 dollars ; to Graduates of ten years and upwards, the Matriculation Fee only.

COLLEGE OF PHYSICIANS AND SURGEONS OF NEW YORK.

THIS is otherwise known as the Medical Faculty of Columbia College. The instruction is given by the following professors, &c. : Dr. J. C. Dalton (Physiology and Hygiene)—*Emeritus :* Dr. Alonzo Clark (Pathology and Practical Medicine)—*Emeritus :* Dr. J. G. Curtis (Physiology and Hygiene) ; Dr. T. M. Markoe (Principles of Surgery) ; Dr. T. Galliard Thomas (Clinical Gynæcology) ; Dr. J. T. Metcalfe (Clinical Medicine)—*Emeritus :* Dr. H. B. Sands (Practice of Surgery) ; Dr. J. W. McLane (Obstetrics and the Diseases of Children) ; Dr. T. T. Sabine (Anatomy) ; Dr. C. E. Chandler (Chemistry and Medical Jurisprudence) ; Dr. E. Curtis (Materia Medica and Therapeutics) ; Dr. F. Delafield (Pathology and Practical Medicine) ; Dr. Wm. Detmold (Military and Clinical Surgery)—*Emeritus :* Dr. W. H. Draper (Clinical Medicine) ; Dr. Cornelius R. Agnew (Diseases of the Eye and Ear) ; Dr. Abraham Jacobi (Clinical, Diseases of Children) ; Dr. Fessenden N. Otis (Clinical, Venereal Diseases) ; Dr. E. C. Seguin (Diseases of the Mind and Nervous System) ; Dr. G. M. Lefferts (Clinical, Laryngoscopy and Diseases of the Throat) ; Dr. G. H. Fox (Clinical, Diseases of the Skin) ; Dr. G. L. Peabody (Clinical Medicine) ; Dr. A. B. Ball (Clinical Medicine) ; Dr. Halsted (Demonstrator of Anatomy) ; Dr. Prudden (Director of the Pathological Laboratory).

The Collegiate Year consists of a regular Winter Session, attendance upon which is required for the graduation. Tuition is by the following methods :

1. *Didactic Lectures.*—During the Session from two to six lectures are given daily by the Faculty. Attendance is obligatory.

2. *Clinical Teaching.*—Ten clinics, covering all departments of medicine and surgery, are held weekly throughout the entire year in the College Building. In addition, the Faculty give daily clinics at the larger City Hospitals and Dispensaries (such as the Bellevue Charity, New York, and Roosevelt Hospital, the New York Eye and Ear Infirmary, the Women's Hospital, &c.) Attendance is optional.

3. *Recitations* are held daily. Attendance is optional.

Personal Instruction.—Personal instruction is given in Practical Anatomy, Experimental Physiology, Operative Surgery, Minor Surgery, Physical

Diagnosis, Ophthalmology, Otology, Laryngoscopy, Normal and Pathological Histology, and the Examination of the urine. Attendance is optional, except upon Practical Anatomy.

Candidates for the Degree of Doctor of Medicine must have attended two full courses of lectures on Anatomy, Physiology, Chemistry, Materia Medica and Therapeutics, Obstetrics, Surgery, Pathology, and Practical Medicine; the second course must have been given in this College. Students are permitted—and are recommended—to complete the two full courses by attendance during three or more sessions, taking only certain branches in each session. Candidates must have studied Practical Anatomy during one winter session; have been engaged during three years in the study of medicine under a regular physician or surgeon; have attained the age of 21 years; and be of good moral character. Each candidate must present a thesis on some medical subject, and pass an examination in the seven branches of medical science above mentioned.

Students who have attended two courses of lectures (one being at this College) on Anatomy, Physiology, and Chemistry, may be examined on these subjects at the end of their second course; and the examination, if satisfactory, is accounted final.

Students and graduates of other schools are admitted under special regulations.

The fees are: Yearly matriculation, 5 dollars; Course of Lectures each Session, 140 dollars, or 20 dollars for each course; Practical Anatomy, 10 dollars, and graduation fee, 30 dollars.

UNIVERSITY OF THE CITY OF NEW YORK.

The Professors in the Faculty of Medicine are: Dr. Alfred C. Post (Clinical Surgery)—*Emeritus:* Dr. Charles I. Pardee (Diseases of the Ear); Dr. John C. Draper (Chemistry); Dr. Alfred L. Loomis (Pathology and Practice of Medicine); Dr. W. Darling (Anatomy); Dr. W. H. Thomson (Materia Medica and Therapeutics, and Diseases of the Nervous System); Dr. J. W. S. Arnold (Physiology and Histology); Dr. J. Williston Wright (Surgery); Dr. Fanueil D. Weisse (Practical and Surgical Anatomy); Dr. W. H. Polk (Obstetrics and Diseases of Women and children; Dr. L. A. Stimson (Physiology and Histology); Dr. R. Witthaus (Physiological Chemistry); Dr. Stephen Smith (Clinical Surgery); Dr. A. E. Macdonald (Medical Jurisprudence and Diseases of the Mind); Dr. H. Knapp (Ophthalmology); Dr. S. O. Vanderpoel (Public Hygiene). There are also four clinical professors; viz., Dr. Drake (Medicine); Dr. Shaffer (Orthopædic Surgery); Dr. Morrow (Dermatology); and Dr. Winters (Diseases of Children).

The Collegiate Year is divided into three Sessions: a Preliminary Session, a Regular Winter Session, and a Spring Session.

The Preliminary Session will begin on Wednesday, September 17. It will be conducted on the same plan as the Regular Winter Session.

The Regular Winter Session will begin October 1, 1884, and end about the middle of March 1885. The Plan of Instruction consists of Didactic and Clinical Lectures, recitations, and laboratory work in all subjects in which it is practicable. To put the laboratories on a proper footing a new building has been erected at an expense of 35,000 dollars. It will contain laboratories fitted for instruction in Chemistry, Histology, Pathology, Materia Medica, Operative Surgery, and Gynæcology.

Two to five Didactic Lectures, and two or more Clinical Lectures, will be given each day by members of the Faculty. In addition to the ordinary clinics, special clinical instruction, without additional expense, will be given to the candidates for graduation during the latter part of the Regular Session. For this purpose the candidates will be divided into sections of twenty-five members each. At these special clinics students will have excellent opportunities to make and verify diagnoses, and watch the effect of treatment. They will be held in the Wards of the Hospitals and at the Public and College Dispensaries.

Each of the seven Professors of Chemistry, Medicine, Anatomy, Materia Medica, Physiology, Surgery, and Obstetrics, will in one evening in each week conduct a recitation on his subject. Students are thus enabled to make up for lost lectures and prepare themselves properly for their final examinations without additional expense.

The Spring Session will begin about the middle of March and end the last week in May. The daily Clinics and Special Practical Courses will be the same as in the Winter Session, and there will be Lectures on Special Subjects by the Members of the Faculty. It is supplementary to the Regular Winter Session. Nine months of continued instruction are thus secured to all students of the University who desire a thorough course.

Fees.—These are: for Course of Lectures, 140 dollars; Matriculation, 5 dollars; Demonstrator's Fee (including material for dissection), 10 dollars; final Examination Fee, 30 dollars.

BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK.

The teaching staff of the College consists of the following professors: Dr. Isaac E. Taylor (Obstetrics and Diseases of Women)—*Emeritus:* Dr. Fordyce Barker (Clinical Midwifery and Diseases of Women); Dr. B. W. McCready (Materia Medica and Therapeutics and Clinical Medicine)—*Emeritus:* Dr. Austin Flint (Principles and Practice of Medicine, and Clinical Medicine); Dr. F. S. Dennis (Principles and Practice of Surgery and Clinical Surgery); Dr. Lewis A. Sayre (Orthopædic Surgery and Clinical Surgery); Dr. Alexander B. Mott (Clinical and Operative Surgery); Dr. Wm. T. Lusk (Obstetrics and Diseases of Women and Children, and Clinical Midwifery); Dr. A. A. Smith (Materia Medica and Therapeutics, and Clinical Medicine); Dr. Austin Flint, jun. (Physiology and Physiological Anatomy); Dr. Joseph D. Bryant (Anatomy and Clinical Surgery); Dr. R. Ogden Doremus (Chemistry and Toxicology); Dr. Edward G. Janeway (Diseases of the Nervous System and Clinical Medicine, and Associate Professor of Medicine); Dr. Henry D. Noyes (Ophthalmology and Otology); Dr. John P. Gray (Psychological Medicine and Medical Jurisprudence); Dr. Beverly Robinson (Clinical Medicine); Dr. J. W. Howe (Clinical Surgery); Dr. Edward L. Keyes (Cutaneous and Genito-Urinary Diseases); Dr. J. L. Smith (Diseases of Children); Dr. W. H. Welch (Pathological Anatomy and General Pathology); Dr. F. H. Bosworth (Diseases of the Throat); Dr. C. A. Doremus (Adjunct to Chair of Chemistry and Toxicology); also the following lecturer: Dr. L. M. Yale (Adjunct, Diseases of Children).

The Collegiate Year in this Institution embraces

the Regular Winter Session, and a Spring Session. The Regular Session begins on Wednesday, September 17, 1884, and ends about the middle of March 1885. During this Session, in addition to four didactic lectures on every week day except Saturday, two or three hours are daily allotted to clinical instruction. Attendance upon two regular courses of lectures is required for graduation. The Spring Session consists chiefly of recitations from text-books. This Session begins about the middle of March, and continues until the middle of June. During this Session, daily recitations in all the departments are held by a corps of examiners appointed by the Faculty. Short courses of lectures are given on special subjects, and regular clinics are held in the Hospital and in the College building.

Fees.—For the Regular Session : Tickets to all the Lectures, Clinical and Didactic, 140 dollars ; for Students who have attended two full courses at other Medical Colleges, and for Graduates of less than three years' standing of other Medical Colleges, 70 dollars ; Matriculation fee, 5 dollars ; Dissection fee (including material for dissection), 10 dollars ; Graduation fee, 30 dollars ; no fees for Lectures are required of Graduates of three years' standing, or of third-course Students who have attended their second course at the Bellevue Hospital Medical College. For the Spring Session ; Matriculation (ticket valid for the following winter), 5 dollars ; Recitations, Clinics, and Lectures, 40 dollars ; Dissection (ticket valid for the following winter), 10 dollars.

The Matriculation Examination consists of English composition ; Grammar, an examination upon the above-mentioned composition ; Arithmetic, including vulgar and decimal fractions ; Algebra, including simple equations ; Geometry, first two books of Euclid. This examination will be waived for those who have received the degree of A.B., those who have passed the freshman examination for entrance into any incorporated literary college, those who have passed a matriculation examination at any recognised medical college or at any scientific school or academy in which an examination is required for admission.

NEW YORK POST-GRADUATE SCHOOL.

IN 1882 there was founded in New York an institution under this name, for the purpose of giving instruction in medical science and practice to gentlemen who had obtained degrees in medicine. There were 100 attendants on the classes in 1882 ; and 118 in 1883.

The Faculty of the School state that they were the first to inaugurate in the City of New York a systematic and comprehensive scheme for the instruction of medical graduates.

No undergraduates are admitted, and no degrees are conferred, but the School is open to all legalised practitioners, and it is specially available for the young graduate who wishes to acquaint himself with the practical duties of his profession, or for older practitioners who are desirous of taking up some special branch of medicine, or who wish to familiarise themselves with the modern advances in diagnosis and treatment. The instruction is given by means of clinics, subjects, and specimens. There are no lectures except clinical lectures, and no demonstrations without subjects and specimens.

The Dispensary, and the Hospitals to which the Instructors are attached, furnish more than 16,000 patients annually, for the illustration of General Medicine and Surgery, Mental and Nervous Diseases, Gynæcology, Obstetrics, Genito-Urinary Diseases, Cutaneous and Syphilitic Affections, Orthopædic Surgery, Diseases of Children, Diseases of the Eye and Ear, and of the Throat and Nose. The new Anatomical room provides for studies in Practical Anatomy and Operative Surgery on the dead body. Practical Pharmacy and Medical Chemistry are taught in the Chemical and Pharmaceutical Laboratories. The new Histological and Pathological Laboratory is also most thoroughly equipped. In the Department of Applied Anatomy, instruction is given on living models, as well as on the dead subject. In addition to the above, the various members of the Faculty hold positions and give instruction in various hospitals and dispensaries.

Each department of the School is open throughout the entire year, and special facilities are given to those who desire to prosecute any line of study, at any time.

The year is divided into two Terms, the *Regular* and the *Intermediate*. During the Regular Term, instruction is carried on by the Professors, Associate Professors, and Lecturers. There is but one course, of four months, in the Intermediate Term. A daily clinic is held throughout this period.

The *Regular Term* will open on Wednesday, Oct. 1, 1884, and continue until Monday, June 2, 1885. The *Intermediate Term* will open on June 2, 1885, and continue until Oct. 7, 1885. Each course of the Regular Term will continue seven weeks, and a single course or any number of courses may be selected. Matriculates will be admitted at any time. There is no matriculation fee.

The clinics will open at 9 A.M. daily (Sunday and legal holidays excepted), and continue until 2 P.M. There will then be an intermission of half an hour, and the remainder of the afternoon, until 4 P.M., will be devoted chiefly to hospital clinics and laboratory work. The clinics at the School will re-open at 4 P.M., and continue until 6 P.M. Evening clinics will be held daily (Saturdays excepted), at 7 P.M. Special instruction in operative surgery, applied anatomy, ophthalmoscopy, otoscopy, in cerebral anatomy and physiology, and in venereal diseases, will be given in the evening. Once a week, a gynæcological clinic will be held in the evening.

Practitioners may enter the School at any time, and take one or more courses of seven weeks' duration, in any department. Special advantages are secured by those who take several courses or pursue continuous studies. Candidates for the *Army* and *Navy* will have special instruction in Civic, Naval, and Military Hygiene, the Examination of Recruits, &c.

Clinical Surgery.—A course of instruction in this department will be given at twelve o'clock on Mondays, Wednesdays, and Fridays, by Dr. James L. Little, and on Tuesdays, Thursdays, and Saturdays by Dr. William F. Fluhrer. Members of the class will have an opportunity of personally examining the patients, and in many instances of carrying out the treatment. In addition to the clinical lectures, the members of the class will be invited to witness operations at St. Luke's and St. Vincent's Hospitals by Dr. Little, and at Bellevue and Mt. Sinai Hospitals by Dr. Fluhrer. Invitations to operations at the other hospitals in this city are generally extended to the class.

Orthopædic Surgery and Mechanical Therapeutics.

On Tuesdays, Thursdays, and Saturdays of each week, at one o'clock, Dr. M. J. Roberts will give systematic and general clinical demonstrations in orthopædic surgery, illustrating these topics by charts, diagrams, models, casts, normal and pathological specimens, and an abundance of living material. The clinical demonstrations at the School will be supplemented by major surgical operations in the orthopædic wards of the hospitals with which Dr. Roberts is connected.

Operative Surgery.—On Monday, Tuesday, and Wednesday of each week, from 7.30 to 10 P.M., Dr. W. D. McKim will give instruction in operative surgery, upon the cadaver. Each course will consist of twelve lessons. The number in each class will be limited to eight. Each member of the class will be enabled to practise all the principal operations.

Minor Surgery and Bandaging.—On Fridays, at 11 A.M., and Saturdays, at 5 P.M., personal instruction will be given in the application of bandages and the various surgical dressings, by Dr. S. D. Powell. Fee for the complete surgical course, 35 dollars.

Diseases of the Mind and Nervous System.—On Wednesdays, Fridays, and Saturdays, at 4 P.M., Dr. W. A. Hammond will give a complete clinical and systematic course upon the diseases of the brain and spinal cord, and upon insanity, illustrating his lectures by clinical material. Students of this branch will have frequent opportunities to examine the patients. On Tuesdays and Thursdays, at 4 P.M., Dr. C. L. Dana will hold clinics on Functional Nervous Diseases and those of the Peripheral System. Dr. G. M. Hammond, Lecturer on Medical Electricity, will give practical demonstrations in electro-therapeutics on Mondays at 4 P.M. Fee for the course, 20 dollars.

Anatomy and Physiology of the Nervous System.—Professor Spitzka will deliver three successive courses of lectures, each of seven weeks' duration. The first will be devoted to the topographical and systemic anatomy, the development and histology of the brain; the second to the physiological anatomy of the brain, with special reference to the localisation and differential indications of special symptoms; and the third to psychological physiology in its relations to mental disease. Each course will consist of fourteen lectures, and of demonstrations. The lectures are illustrated by original plates and diagrams, &c. There will be review demonstrations and lectures by Dr. N. E. Brill, the Lecturer of this Department. Fee, 20 dollars.

Diseases of the Eye and Ear.—Dr. D. B. St. John Roosa, assisted by Dr. J. B. Emerson, will hold an ophthalmic and aural clinic at the Manhattan Eye and Ear Hospital on Tuesdays, Thursdays, and Saturdays from 2.30 until 4.30 P.M. Dr. W. O. Moore will hold clinics at the School on Monday, Wednesday, and Friday mornings at 9 A.M. Dr. F. C. Riley will give instruction every Tuesday at 9 A.M., on the refraction and accommodation of the eye. On Thursday evenings, at eight o'clock, Dr. Emerson will give instruction in ophthalmoscopy at the Manhattan Eye and Ear Hospital. On Tuesday evenings, at eight o'clock, otoscopy, with the use of the Eustachian catheter, Politzer's apparatus, will be taught by Dr. Dayton, at the School. Fee for the course, 20 dollars.

Operative Surgery of the Eye.—Dr. W. O. Moore will give instruction in this department on the cadaver and upon fresh eyes. Fee, 15 dollars.

Diseases of the Throat and Nose.—Dr. Clinton Wagner, Surgeon in Charge of the Metropolitan Throat Hospital, will hold clinics on Mondays and Fridays, from 2.30 to 4 P.M., at the Hospital, and on Wednesdays, at the same hour, at the School, a clinic, and will also lecture. On Tuesdays, Thursdays, and Saturdays, from 2.30 to 3.30 P.M., a clinic will be held at the School. Fee, 15 dollars.

Pathology, Clinical Medicine, and Therapeutics.—Dr. T. E. Satterthwaite gives demonstrations in Morbid Anatomy and Histology, with special reference to their bearings on clinical medicine, on Mondays, Wednesdays, and Fridays at 5 P.M. *Post mortem* Examinations will be made at the Presbyterian Hospital in the presence of the class. Instruction in Normal and Pathological Histology is given on Mondays, Wednesdays, and Fridays, from 2.30 to 4.30 P.M., by Prof. Satterthwaite, assisted by Prof. Porter and Dr. Elliott. Dr. Andrew H. Smith will hold clinics at the School on Tuesdays and Thursdays at 5 P.M. He will also give clinical instruction in the wards of the Presbyterian Hospital. On Tuesdays and Thursdays, at 10 A.M., Dr. S. S. Burt gives personal instruction in Auscultation and Percussion. On Mondays and Wednesdays, at 10 A.M., and on Thursdays at 11 A.M., Drs. Elliott and McCarroll conduct courses in Urinary Analysis. Fee for the course in Pathology, Medicine, Physical Diagnosis, and Urinary Analysis, 30 dollars.

Venereal and Genito-Urinary Diseases and Diseases of the Skin.—Prof. F. R. Sturgis will give a course on Venereal Diseases at the School during the winter session. Clinics will also be held at Charity Hospital during December, January, February, and March. Associate Professor H. G. Lyttle will give a course on Genito-Urinary Diseases at the School, in which the diagnosis and treatment of these affections will be practically taught. Drs. Carpenter and Buechler will also give instruction on these subjects. Clinics on these diseases will be held daily in the morning and evening. Dr. George Henry Fox, Clinical Professor of Diseases of the Skin in the College of Physicians and Surgeons will give practical courses on the treatment of Skin Diseases. Clinics will be held on Mondays, Wednesdays, and Fridays by Prof. Fox or his assistant, Dr. George T. Elliot, when special instruction in dermatological diagnosis will be given. Fee for the course, 20 dollars.

Diseases of Women.—Special attention is given to the methods of examining, modes of treatment, fitting of pessaries, surgical operations, &c., in the School, and at the State Woman's Hospital. Drs. Dawson and Emmet purpose establishing, in connection with their clinical instruction, a course of Gynæcological Surgery upon the Cadaver. Matriculates will have opportunities to witness operations by the surgeons of the Woman's Hospital, and Profs. Dawson and Emmet will also invite members of the class to assist at operations selected from the clinic, and to witness private operations of particular interest. Fee for the course, 30 dollars.

Obstetrics.—Dr. E. L. Partridge will give a complete course in his branch of medicine at 11 A.M. on Mondays and Saturdays. It is sought to teach in full detail all the obstetric operations by aid of the Budin-Pinard manakin, the natural fœtus being employed. Obstetric cases will be given out to members of the class. Fee, 10 dollars.

Diseases of Children.—On Tuesdays and Fridays of each week, at 10 A.M., Dr. Mary Putnam Jacobi

will hold clinics in children's diseases. The lectures will be amply illustrated. On Mondays and Wednesdays, at 10 A.M., Dr. S. J. McNutt, Lecturer on Children's Diseases, will conduct the clinics. On Thursdays and Saturdays, at 10 A.M., Dr. S. M. Roberts, assisted by Dr. J. Blake White, will conduct the clinic. Fee, 15 dollars.

Applied Anatomy.—On Mondays, Wednesdays, and Fridays of each week, at 3 o'clock P.M., Dr. A. L. Ranney will give a systematic course of lectures and demonstrations upon anatomy, with special reference to its practical applications to diagnosis. Four practical demonstrations will also be given weekly from the living subject and cadaver, in morning and evening hours. Special care will be exercised in perfecting the anatomical knowledge of those matriculates who are devoting themselves to particular lines of study in medicine and surgery. Separate classes will be formed, if necessary, for such purposes. Fee, 20 dollars.

Naval, Military, and State Hygiene.—The course will be thoroughly practical, having in view instruction in the preservation of health and prevention of disease in the every-day life of the citizen, soldier, and sailor. Every important factor influencing the life of man will be taken into consideration. This course is given by Dr. Kershner, Surgeon U.S.N., with the full approbation of the Surgeon-General of the Navy, and is the first of the kind instituted in the United States, by an officer of one of the medical departments of the Government. Fee, 20 dollars.

Tickets.—An Annual Ticket will be issued to those who may prefer it, admitting the holder for twelve months to consecutive courses in any branches that may be selected. Fee for the Annual Ticket (good for twelve months from date of issue, and admitting to all courses for that time), 400 dollars. A Semi-annual Ticket, admitting to all courses for six months, is also issued for 225 dollars.* A ticket of the same character, good for three months, is also issued for 150 dollars.* Tickets of admission to all the clinics of the School, but not available for the Laboratory, Operative, Ophthalmoscopic, Otoscopic, or other personal courses (good for one month from date), are issued. Fee, 50 dollars.

There are also post-graduate courses or other facilities for instruction for practitioners in Philadelphia, Boston, Baltimore, Chicago, Louisville, St. Louis, and Cleveland.

CANADA.

THE following are the Medical Examining Bodies and Schools in the several provinces constituting the Dominion of Canada.

NOVA SCOTIA.—Halifax Medical College.

ONTARIO.—College of Physicians and Surgeons of Ontario; Medical Department, Victoria College, Toronto; Medical Faculty of Queen's College, Kingston; Royal College of Physicians and Surgeons, Kingston; Medical Faculty of the University of Ottawa; University, Toronto; Trinity College Faculty of Medicine, Toronto; Toronto School of Medicine; Trinity Medical School; Medical Department of the Western University (London); Women's Medical College (Toronto); Women's Medical College (Kingston).

QUEBEC.—College of Physicians and Surgeons of Quebec; Bishop's College, University Faculty of Medicine (Montreal); Medical Department of Laval University (Montreal and Quebec); Faculty of Medicine of McGill University; Ecole de Médecine et de Chirurgie de Montreal.

UNIVERSITY OF TORONTO.

THE University of Toronto has no Medical Department, and does not teach Medicine. Its sole functions are to prescribe Studies, examine Candidates, confer Degrees, and award Scholarships, Medals, &c. It has by statute the power, with the approval of the Governor of Ontario and Council, to affiliate with itself independent incorporated Medical Schools.

The Degree of Bachelor of Medicine may be obtained, either (1) by taking a Pass Course, or (2) by taking an Honour Course.

Candidates must pass the Matriculation Examination unless (1) they possess a Degree in Arts, not being an Honorary Degree, from any Dominion or British University; or (2) they have already matriculated in the Faculty of Arts, or in the Faculty of Law in this University. They must also produce satisfactory certificates of good conduct, and of having completed the sixteenth year of their age. The Matriculation Examination (both Pass and Honours) commences in the latter part of June, and Supplemental Examinations (Pass alone) are held in the latter part of September. Candidates on giving notice of intention to present themselves at the Matriculation Examination must signify whether they propose taking the Pass or the Honour Examination. Scholarships are only awarded in connection with the latter. The following groups of subjects must be passed by every Matriculant: 1. Three out of four languages, Latin, Greek, French, and German, one of which must be Latin; 2. Mathematics, including Arithmetic, Algebra to the end of Quadratics, and the first three books of Euclid; 3. English Grammar, Composition, and Dictation, with the Outlines of English History and the Geography of America and Europe. Extra Honour papers are set in all the above-mentioned subjects, and special attention is paid to translation from English into other languages.

Undergraduates must attend lectures and receive practical instruction, during four years, at a recognised School of Medicine. Each Undergraduate, at the end of each of the four years, must present himself at the Annual Examination. These examinations are styled the first, second, third, and fourth Professional Examinations, and are to be passed by all candidates for the Degree. Graduates in Arts of this University, with honours in the department of Natural Sciences, are exempted from the First Professional Examination, and from the fee for the same. They must, however, take Anatomy along with the Second Professional Examination. No candidate can pass a Professional Examination who has not obtained at least one-half of the marks required; nor is a candidate considered as having passed any subject who has not obtained at least one-third of the marks allotted to it. Every Undergraduate who proposes to present himself at a Pro-

* This ticket is only available for a single complete course in Operative Surgery, a single complete course in Ophthalmoscopy and Otoscopy, and a single complete Laboratory Course.

fessional Examination must send in to the Registrar a statement (according to a printed form furnished) of the course he is taking, whether Pass or Honour, of the lectures attended, and of the practical instruction received, with the names of the Teachers, and such other particulars as the printed form may indicate, together with the original certificates referred to in the statement.

The following are the certificates required for the different examinations, and the subjects of examination.

First Professional Examination.—Certificates are required : 1. Of Matriculation ; 2. Of having attended a course of lectures on each of the following subjects : Anatomy, 100 lectures ; Physiology and Inorganic Chemistry, each 60 lectures ; Natural Philosophy, 20 lectures ; Botany and Zoology, each 30 lectures. 3. Of practical instruction in anatomy during six months. The subjects of examination are : 1. Anatomy of the Bones, Muscles, and Ligaments, and of the Viscera of the Abdomen and Thorax ; 2. Elements of Inorganic Chemistry ; 3. Elements of Natural Philosophy, Electricity, Heat, and Light ; 4. Elements of Botany. (An acquaintance with the noxious and medicinal plants of the Canadian flora is expected.) 5. Elements of Zoology ; and, for candidates for honours, Comparative Anatomy of Vertebrata, and Practical Examination in Natural Philosophy.

Second Professional Examination. — Candidates must produce certificates : 1. Of having attended lectures on Anatomy, Physiology, Materia Medica and Therapeutics, each 100 lectures ; Organic Chemistry ; 2. Of Practical Instruction in Anatomy (a second course of six months) ; Histology and Physiological Chemistry, each during three months ; 3. Of having dissected the human body once ; 4. Of being skilled in Compounding and Dispensing Drugs. The subjects of examination are : 1. Elements of Organic Chemistry ; 2. Anatomy ; 3. Physiology ; 4. Materia Medica and Therapeutics ; and (for honours) Physiology of Muscle, Nerve Circulation, &c.

Third Professional Examination.—The candidates must produce evidence : 1. Of having attended lectures on Practice of Medicine, Surgery, Obstetrics, each 100 lectures ; Clinical Surgery and Medicine and General Pathology, each 50 lectures ; 2. Of having dissected the human body a second time ; 3. Of Practical Instruction in Pathological Histology during three months. The subjects of this examination are : 1. Practice of Medicine ; 2. Surgery and Surgical Anatomy ; 3. General Pathology, including Morbid Anatomy and the mode of conducting Necropsies ; 4. Obstetrics and Diseases of Women and Children ; 5. Clinical Medicine and Surgery.

Fourth Professional Examination.—Certificates are required : 1. Of having attended lectures on :—Clinical Medicine and Surgery, and Forensic Medicine, each 50 lectures ; Hygiene, 25 lectures ; Medical Psychology, 12 lectures ; 2. Of Practical Instruction in Chemistry in its application to Hygiene and Forensic Medicine ; 3. Of having attended at least six clinics in a Public Lunatic Asylum ; 4. Of having conducted at least six Labours ; 5. Of proficiency in Vaccination ; 6. Of attendance in the wards of a Public Hospital accommodating not less than 100 beds during eighteen months ; 7. Of attendance for six months on the out practice of a Hospital, Dispensary, or registered Practitioner ; 8. Of having attended twelve Necropsies. The subjects of examination are : 1. Practice of Medicine ; 2. Surgery ; 3. Forensic Medicine ; 4. Hygiene ; 5. Medical Pyschology ; 6. Clinical Medicine and Surgery ; 7. Practical Chemistry in its application to Forensic Medicine and Hygiene.

Scholarships.—The following Scholarships are annually offered for competition : At Matriculation, one of 100 dollars and one of 50 dollars ; at each of the first three Professional Examinations, one of 120 dollars and one of 80 dollars. The First Year Scholarships are not open to Graduates in Arts with Honours in the Department of Natural Sciences. No Professional Scholarship will be awarded to any Candidate who has not obtained First Class Honours in the Examination for which it was conferred. Each Scholarship is tenable for one year only, but the Scholar of one year is eligible for the Scholarship of a succeeding year. A gold medal and three silver medals are offered annually for competition among the Undergraduates who have obtained the degree of M.B., with First Class Honours, and are awarded according to the percentage of marks in the aggregate results of the Second, Third, and Fourth Professional Examinations ; but the gold medal is only awarded on the special recommendation of the Examiners. Prizes, each of the value of 10 dollars, in books, may be awarded annually among Undergraduates in Law, Medicine and Arts, for the best Composition in Greek Verse, Greek Prose, Latin Verse, Latin Prose, English Verse, English Prose, French Prose, or German Prose. Certificates of Honour will be given to those students who, at any of the Examinations, have been placed in the First Class in Honours in any Department. One Gold and two Silver Medals, called the 'Starr Medals,' are conferred upon the three Bachelors of Medicine who have attained, in the course of their Annual Professional Examinations, the highest marks in the following subjects : Anatomy for the first and second years, and in Surgical Anatomy of the third year ; Physiology for the first and second years, and Histology, Physiological Chemistry and Practical Physiology of the second year ; General Pathology and in Morbid Anatomy and Histology of the third year. Every recipient of the Medal must have attained the standing of First Class in each of the above-mentioned subjects, and must have been classed in Honours in the Fourth Professional Examination.

Candidates for Honours are entitled to First Class Honours in any of the Professional Examinations if they obtain 75 per cent. of the aggregate marks ; those who obtain 66 per cent. will be entitled to Second Class Honours. Extra papers on all the Pass Subjects will be set for Honour candidates, as well as papers on certain extra Honour subjects, viz., Comparative Anatomy of the Vertebrata, Natural Philosophy, the Physiology of Nerve, Muscle, Circulation, &c. Candidates proceeding to the Degree of M.B. by taking the Honour Courses are grouped in two classes. Those receive the Degree with First Class Honours who have been placed in the First Class Honour List in the second, third, and fourth Professional Examinations. Those receive their Degree with Second Class Honours who have been placed in the Honour List in the second, third, and fourth Professional Examinations.

Degree of M.D.—Candidates for the Degree of M.D. must be of one year's standing from admission

to the Degree of M.B., and have composed an approved thesis npon some medical subject.

Fees.—The fees are: Matriculation, 5 dollars; Registration of exemption from this examination for Graduates in Arts from other Universities, 5 dollars; for Matriculants from other Faculties in the University, 3 dollars; for Graduates in Arts of this University, 2 dollars. No fee is exacted from Graduates in Arts of this University who have taken honours in Natural Science. For each Professional Examination, 2 dollars; a rejected candidate may present himself at the same examination in the following year on payment of 1 dollar. Degree of M.B., 6 dollars; Degree of M.D., 8 dollars.

UNIVERSITY OF TRINITY COLLEGE.

THE following are the requisites for admission to the Degree of Doctor of Medicine and Master of Surgery in this University.

The candidate must have passed the Matriculation Examination in Arts or Medicine of Trinity College, or of some other recognised University, or that of the College of Physicians and Surgeons of Ontario or Quebec, or that of the Law Society of Upper Canada, or an examination equivalent to any of the above. The subjects of the Medical Matriculation Examination are: Writing and Dictation; English Language; Arithmetic; Algebra (including Simple Equations); Geometry (first Two Books of Euclid; Latin (Translation and Grammar); Greek (Translation and Grammar) or Natural Philosophy; and one of the following subjects: Greek, French, German, Scripture History, or Natural Philosophy.

The candidate must produce a satisfactory certificate of good conduct, must be 21 years of age, and must have regularly attended lectures extending over four winter sessions, or have studied one year with a medical practitioner, and have subsequently attended lectures during three winter sessions. He must have attended not less than two courses of six months each on Anatomy, Practical Anatomy, Medicine, Surgery, Chemistry, Midwifery and Diseases of Women and Children, Materia Medica and Therapeutics, and Physiology, including Histology: two three months' courses on Medical Jurisprudence, and one course of three months of Practical Chemistry, including Toxicology, Botany, and Sanitary Science respectively. He must also have attended for at least eighteen months the practice of some General Hospital, and have attended, during two sessions, Clinical Lectures on Medicine and Surgery; and, for at least six months, the practice of a Lying-in-Hospital; or he must have otherwise enjoyed equivalent obstetrical advantages, with attendance upon at least six cases of Labour.

The examinations are Primary and Final. The Primary Examination embraces Descriptive Anatomy, Physiology, including Histology, General Chemistry and Chemical Physics, Practical Chemistry, Botany, Materia Medica and Therapeutics, and Toxicology. It may be passed at the close of the second year.

The Final Examination embraces Theory and Practice of Medicine, including Medical Pathology, Principles and Practice of Surgery, Midwifery and Diseases of Women and Children, Medical Jurisprudence, and Sanitary Science. It takes place at the close of the fourth year.

Should the candidate desire it, he may undergo his entire examination in all the branches at the end of his last year's study. The examinations are held annually in the spring.

Registered Practitioners, having passed an Examination equivalent to the Primary, are required to pass only the Final, but pay the full fee.

Fees.—These are, Primary Examination, 10 dollars; Final ditto, 14 dollars. Full Fee, including all College Examinations, 24 dollars. Candidates rejected at either the Primary or the Final Examination have the fee returned, less 5 dollars.

TRINITY MEDICAL SCHOOL.

THIS School is in affiliation with the University of Trinity College; also with the Universities of Toronto and Manitoba; and is recognised by the Royal Colleges of Physicians and Surgeons of Great Britain.

Students are advised, before commencing their medical studies, to pass the Matriculation Examination of the Medical Council of Ontario or Quebec, either of which will be accepted by the University of Trinity College. Students from the Maritime Provinces, Ontario, or the United States, who do not desire to pass the Council Examination, will be admitted to attendance on Lectures, but, if they desire to graduate, must present themselves for the Matriculation Examination of Trinity University, on the second Saturday of October or March, or the Matriculation in Toronto University at the usual time. The matriculation of the Universities may be passed at any time before graduation.

The Toronto General Hospital has a large number of patients in the wards, who are visited daily by the medical officers in attendance. The attendance of out-door patients daily is also very large, and thus abundant opportunities are enjoyed by students, for acquiring a familiar knowledge of Practical Medicine and Surgery. The Burnside Lying-in Hospital, amalgamated with the Toronto General Hospital, affords special and valuable facilities for the study of Practical Midwifery. The Mercer Eye and Ear Infirmary is also amalgamated with the Toronto General Hospital, and affords special facilities for students in this department. The Toronto Dispensary, established several years ago, is open to students free of charge.

Daily clinical instruction will be given by members of the Hospital Staff, on all interesting cases, Medical and Surgical. Arrangements have been recently made for the delivery of daily clinics, in the theatre of the Hospital, by the respective professors in medicine and surgery of both schools, in addition to the usual clinics.

Fees.—The Fee for Anatomy, Surgery, Practice of Medicine, Obstetrics, Materia Medica, Physiology, and General Chemistry, 12 dollars each; Practical Anatomy, Practical Chemistry, Normal Histology, and Pathological Histology, 8 dollars each; Clinical Medicine, Clinical Surgery, and Medical Jurisprudence, 6 dollars each; Botany, Sanitary Science, Zoology, and Medical Pathology, 5 dollars each; Registration Fee (payable once only), 5 dollars. Students are free in all the regular Branches after having attended the School during the two full courses.

Two Scholarships, of 50 dollars and 30 dollars respectively, are awarded at the end of the first session; one of 50 dollars at the end of the second year, and another of the same value at the end of the third year. A Gold and two Silver Medals are

also awarded at the end of the last session. Fellowship diplomas are awarded at the close of the Final Examination to candidates whose standing has been sufficiently high to merit them.

FACULTY OF MEDICINE OF McGILL UNIVERSITY, MONTREAL.

THE Matriculation Examination comprises the following subjects: English Language (including Grammar and Composition), Arithmetic (including Vulgar and Decimal Fractions), Algebra (including Simple Fractions), Geometry (first two books of Euclid), Latin (Translation and Grammar), and one of the following optional subjects: Greek, French, German, Natural Philosophy (including Mechanics, Hydrostatics, and Pneumatics). Graduates in Arts of recognised universities are not required to submit to the Matriculation Examination, and a certificate of having passed this examination before the College of Physicians and Surgeons of Ontario or of Quebec is accepted.

Candidates for the degree of Doctor of Medicine and Master of Surgery must be 21 years of age, must have studied medicine four years, one session being at this school, and must pass the necessary examinations. Graduates in Arts of recognised universities, and students who produce evidence of having studied a year with a physician subsequent to passing the Matriculation Examination, can qualify for examination after attendance on three sessions.

Candidates for the Final Examination must furnish testimonials of attendance on the following courses: Anatomy, Chemistry, Materia Medica and Therapeutics, Institutes of Medicine, Principles and Practice of Surgery, Midwifery and Diseases of Women and Children, Theory and Practice of Medicine, Practical Anatomy, Clinical Medicine, Clinical Surgery—each two six-months' courses; Medical Jurisprudence—one course of six months, or two courses of three months; Practical Chemistry, Botany or Zoology, Hygiene—each one three-months' course duration; not less than twenty-five demonstrations upon Microscopic Anatomy, Physiology, and Pathology. Testimonials equivalent to, though not precisely the same as those above stated, may be presented and accepted. The candidate must have attended during eighteen months the practice of the Montreal General Hospital, or that of some other approved hospital, and have compounded medicines for six months. He must also have attended for at least six months the practice of the University or other approved Lying-in Hospital, and have attended at least six accouchements.

The examinations at the close of each session are arranged as follows: *First Year.*—Elementary Anatomy and Physiology, Chemistry (Chemical Physics and Chemical Philosophy), Materia Medica, Practical Anatomy, Botany. *Second Year.*—Primary Pass Examination: Anatomy, Practical Anatomy, Physiology, Chemistry, Practical Chemistry, Materia Medica. *Third Year.*—Sessional Examination: Medical Jurisprudence with Toxicology, Hygiene,* Medicine, Surgery, Midwifery. *Fourth Year.*—Final Pass Examination: Medicine, Surgery, Midwifery, Clinical Medicine, Clinical Surgery, Medical Anatomy, Surgical Anatomy.

The Sessional Examinations at the close of the first and third years are compulsory. At the Primary Examination at the end of the second year, the student may leave two branches for the third year; in any case, Chemistry and one other must be taken at the end of the second year.

The Collegiate Courses of the School are a Winter Session, extending from the 1st of October to the end of March, and a Summer Session, from the end of the first week in April to the end of the first week in July.

Students from Ontario and Quebec are advised to pass the Matriculation Examination of the Medical Councils of their respective Provinces before entering upon their studies. Students from the United States and Maritime Provinces must present themselves for the Matriculation Examination of the University on the first Friday of October, or the last Friday of March.

The Montreal General Hospital has an average number of 150 patients in the wards, the majority of the cases being acute. The shipping and large manufactories contribute many examples of accidents and surgical cases. In the out-door department there is a daily attendance of between 75 and 100 patients, which affords excellent instruction in minor surgery, routine medical practice, venereal diseases, and the diseases of children. Clinical clerkships and dresserships can be obtained on application to the members of the Hospital staff. The University dispensary was established for the purpose of affording to senior students practical instruction in diseases of women. Two other special departments have been added, viz.: Diseases of Children and Diseases of the Skin.

The clinical teaching is conducted in the wards and theatre of the General Hospital, daily, throughout the session. Ample opportunities are afforded to the student to investigate the cases.

The fees arranged according to years, are as follows:—First year, 79 dollars; second year, 92 dollars; third year, 75 dollars; fourth year, 65 dollars; Hospital Ticket, 28 dollars; Lying-in-Hospital (six months), 8 dollars; Matriculation, 5 dollars; Graduation, 30 dollars. All fees are payable strictly in advance.

* May be taken at the end of the second year.

COLLEGE OF PHYSICIANS AND SURGEONS OF QUEBEC.

EVERY medical student of the province of Quebec, before beginning his professional studies, must pass a satisfactory examination upon the following subjects: English and French, Latin, Geography, History, Arithmetic, Algebra, Geometry, and Belles-Lettres, and upon any one of the following subjects: Greek, Natural and Moral Philosophy. He must also present a certificate of a good moral character.

The examination is oral and written; and the oral part of the examination is conducted jointly by two examiners, one speaking French and the other English.

The Board may recognise an equivalent preliminary examination before any authorised College or Licensing Board in Her Majesty's Dominion, provided that the same privilege is accorded to the students of this province.

Every medical student must pursue his professional studies during not less than four years from the time of his having passed the Preliminary Examination. Of the four years, three six months' sessions at least must be passed in attendance upon lectures at an University, College, or incorporated

School of Medicine recognised by this Board, the first whereof shall be so passed the year immediately succeeding the Preliminary Examination. Every student must pursue the following curriculum of study: General or Descriptive Anatomy, Practical Anatomy, Surgery, Practice of Medicine, Midwifery, Chemistry, Materia Medica and General Therapeutics, the Institutes of Medicine or Physiology, and General Pathology, Clinical Medicine, Clinical Surgery, two six months' courses of each; Medical Jurisprudence, a course of six months, or two courses of three months; Botany and Hygiene, a three months' course of each: and a course of not less than twenty-five demonstrations upon Microscopic Anatomy, Physiology, and Pathology. He must attend the general practice of an Hospital containing not less than fifty beds, under the charge of not less than two physicians or surgeons, for not less than eighteen months, or for three periods of not less than six months each. He must attend six cases of labour, and compound medicine for six months. Each six months' course must consist of 120 lectures except those of Clinical Medicine, of Clinical Surgery, and of Medical Jurisprudence.

The total duration of the examination is one hour and forty-five minutes.

Before examination the candidate must deposit the required fee, and produce satisfactory evidence that he has attained the full age of twenty-one years, and that he has complied with the rules and regulations of the Board.

Fees.—These are: Preliminary or Matriculation Examination, 10 dollars; Diploma or Licence to Practice, 20 dollars; annual subscription, 2 dollars; registration of additional degrees or title, 1 dollar. If a Candidate for the Licence or for the Preliminary Examination be rejected, he forfeits half the fees.

BISHOP'S COLLEGE UNIVERSITY FACULTY OF MEDICINE, MONTREAL.

THIS University confers the degrees of Doctor of Medicine and Master of Surgery. The degree of Master of Surgery (C.M.) is not conferred on any person who does not at the same time obtain the degree of Doctor of Medicine (M.D.). Each student must undergo, prior to the commencement of his medical studies, a Preliminary Examination upon the following subjects: English, French, Latin, Arithmetic, Algebra, Geometry, History, Belles-Lettres, and one of the following optional subjects: Greek, Natural and Moral Philosophy. Candidates for degrees must have been engaged uninterruptedly for four years in medical and surgical study; but a certificate of having studied one full year with a duly licensed practitioner reduces the period of study at the University to three sessions. Students must matriculate afresh at the commencement of every session, on or before the 1st of December. Every candidate for graduation must give sufficient evidence by certificates: 1. That he has attended two six months' courses of lectures on each of the following subjects: (*a*) General or Descriptive Anatomy, Principles and Practice of Surgery, Theory and Practice of Medicine, Midwifery and Diseases of Women and Children, Chemistry, Materia Medica, and Therapeutics, and Physiology; (*b*) One six months' course or two three months' courses of Medical Jurisprudence, one six months' course of Pathology, one three months' course of Botany, of Hygiene, and also of Practical Chemistry and Microscopy, and also a course of not less than twenty-five demonstrations upon Microscopic Anatomy, Physiology and Pathology; (*c*) Not less than two six months' courses of Clinical Medicine and Clinical Surgery; (*d*) Two six months' courses of Practical Anatomy; (*e*) That he has attended for the last eighteen months, or three periods of six months each, the medical and surgical practice of a hospital in which are contained not less than fifty beds, under the charge of not less than two physicians or surgeons, and that he has been engaged for at least six months in compounding and dispensing medicines. That he has attended at least six cases of midwifery.

Of the four years of medical and surgical study one full course on each branch mentioned in sections *a* and *b* must be attended in this University.

Every candidate for the degree must, on or before the 1st day of March, deliver to the Dean of the Medical Faculty, a declaration in his own handwriting that he has completed his twenty-first year of age (or that he will have done so before the day of graduation); and a statement of his studies, accompanied with proper certificates.

Every candidate is examined both in writing and *vivâ voce*. The Examinations are divided into Primary and Final. The Primary Examination comprehends Anatomy, Chemistry, Practical Chemistry, Materia Medica, Physiology, and Botany or Zoology. The Final Examination includes Practice of Medicine, Clinical Medicine, Surgery, Clinical Surgery, Midwifery and the Diseases of Women and Children, Medical Jurisprudence, Pathology, and Hygiene.

Candidates may be admitted to examination on the Primary branches at the end of the third year of their study. The Final Examination does not take place until the candidate has completed his fourth year.

Fees.—The fees for the classes of Pathology, Hygiene, Botany, and Practical Anatomy, are 6 dollars each; Medical Jurisprudence, 10 dollars; Practical Histology, 16 dollars; all other classes, 12 dollars each. Degree of Doctor of Medicine and Master in Surgery, 20 dollars; Registration Fee, 1 dollar.

HALIFAX UNIVERSITY AND MEDICAL COLLEGE.

CANDIDATES for the degree of Doctor of Medicine must have attended lectures for at least four years after passing the Matriculation Examination. This examination comprises the following subjects: 1. *Compulsory*: English Language (including Grammar, Composition, and Writing from Dictation); Arithmetic (including Vulgar and Decimal Fractions and the Extraction of the Square Root); Algebra (to the end of Simple Equations); Geometry (first three books of Euclid); Latin (one book, Translation and Grammar); Elementary Mechanics of Solids and Fluids. 2. *Optional:* One of the following subjects: History of England, with questions in Modern Geography; French Translation; German Translation; One Greek Book; History of Nova Scotia; History of the Dominion of Canada. The fee is five dollars, and is not returned in cases of failure. Candidates for this examination must be at least 16 years of age. Graduates in Arts of recognised Universities are not required to pass the Matriculation Examination.

Instruction in medicine in the surgery of a recognised practitioner for one year is received as equivalent to a year of study.

The professional examination is divided into primary and final. The former comprises Anatomy, Chemistry, Materia Medica, Physiology and Botany, or Zoology; the latter, Medicine, Surgery, Obstetrics, and Medical Jurisprudence. Candidates may present themselves for the primary examination at the end of the third session, or third year of study.

Candidates for the final examination must produce certificates of having attended two six months' courses each of Anatomy, Chemistry, Materia Medica, Physiology, Surgery, Midwifery, Medicine, Practical Anatomy, Clinical Medicine, and Clinical Surgery; one three months' course each of Practical Pharmacy, Medical Jurisprudence, Botany, and Practical Chemistry; the practice of a recognised Hospital during twelve months; the practice of a Lying-in Hospital for at least six months (or of having attended at least six cases of labour); of having had three months' practice in Dispensing; and of having acquired proficiency in the practice of Vaccination. One session at least must be attended in the Halifax Medical College. Each candidate must present a thesis on some medical or surgical subject, and sign a declaration that he is twenty-one years of age. The examination is oral and written, in all branches; and there is a Clinical Examination in Medicine and surgery at the bedside.

The fee for the degree of Doctor of Medicine and Master of Surgery is twenty dollars, with a registration fee of one dollar.

COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO.

All persons, whatever qualifications they may possess, must be examined by this College in order to obtain a licence to practise in the province of Ontario.

Candidates for the membership of this College must spend four years (forty-eight months) in professional studies after having passed a matriculation examination in the English Language, Arithmetic, Algebra (including Simple Equations), Geometry (first two books of Euclid), Latin (Translation and Grammar), and either Greek, French, German, or Natural Philosophy (including Mechanics, Hydrostatics, and Pneumatics). Graduates in Arts, or students who have matriculated in arts in any University in the British dominions, are not required to pass the Matriculation Examination; and Graduates in Arts may pass the final examination at the end of three years.

Every candidate must have attended, in an University, college, or school of medicine, two courses of six months each (each course consisting of not less than 100 lectures), in Anatomy, Practical Anatomy, Physiology (including Histology), Theoretical Chemistry, Materia Medica and Therapeutics, Medicine, Surgery, Midwifery and Diseases of Women and Children, Clinical Medicine and Clinical Surgery; two courses, of three months each, in Medical Jurisprudence; one course of three months in Practical Chemistry, including Toxicology and Botany; one course of not less than twenty-five demonstrations on Physiological and Pathological Histology; and one course of twenty lectures on Sanitary Science.

The Professional Examination is divided into primary and final. The Primary Examination, at the end of the second or third winter session, comprises Descriptive Anatomy, Physiology and Histology, Theoretical and Practical Chemistry, Toxicology, Materia Medica and Therapeutics, and Botany. (Graduates in Arts who have attended one course of lectures on Botany, and two on Theoretical Chemistry, and have passed an examination in these subjects, are not subjected to further examination thereon.) The final examination comprises Medical and Surgical Anatomy, Theory and Practice of Medicine, General Pathology, Surgery and Operative Surgery, Midwifery and Diseases of Women and Children, Operative Midwifery, Medical Jurisprudence, and Sanitary Science.

Before being admitted to the Final Examination the candidate must have spent six months in the office of a regularly qualified medical practitioner in dispensing medicine, have attended the practice of a general hospital for twenty-five months, have attended six courses of Midwifery, and have attained the age of twenty-one years.

The Primary Examination is entirely oral, the Final is entirely written. Any candidate who fails in any one branch at the Primary Examination is held to have failed in all. Any candidate who passes in four or more branches at the Final Examinations, but fails in the others, is required to pass in the latter only at a subsequent examination. Persons intending to practise Homœopathy are on application examined by Homœopathic Examiners.

Persons from recognised colleges outside the provinces of Ontario and Quebec must pass the matriculation examination, and afterwards attend one full winter course of lectures during two winter sessions in some one of the Ontario Medical Schools, and such other course or courses as may be necessary to complete the required curriculum; and must pass all the examinations.

The *Fees* are: Registration of Matriculation Examination, 20 dollars; Primary Examination, 20 dollars; Final Examination, including Registration, 30 dollars; Ordinary Registration, 10 dollars; subsequent Registration of Additional Titles, 2 dollars; Diploma of Membership, 5 dollars (free to those who attain membership by examination). No portion of the examination fees is returned to unsuccessful candidates; but such candidates are admitted to one subsequent examination without additional payment.

TEXT-BOOKS.

The object of the subjoined notes is to inform the student, in general terms, of the works which he may use as text-books. The list is not intended to be exclusive: nor is it our purpose to say always which book is the best in any subject. Some students learn best from one book; others from another. Again, some books are more adapted than others to the teaching of the school to which the pupil belongs. In addition to the ordinary text-books, reference will be made to some which, though not absolutely necessary to the student, may be studied with advantage.

ANATOMY AND PHYSIOLOGY.

Besides the descriptions of the anatomy of the bones in the chief text-books, such as those of Quain and Wilson, there are also some special works on the subject. Among them are Mr. Luther Holden's *Human Osteology* (sixth edition, J. & A.

Churchill). The same firm publishes a *Student's Guide to Osteology*, by Mr. Wagstaffe. There is also Mr. Norton's *Osteology for Students* (Baillière, Tindal, & Cox). The anatomy of the joints is especially and ably treated in Mr. Henry Morris's *Anatomy of the Joints of Man* (J. & A. Churchill). For the early study of anatomy, Mr. St. George Mivart's *Elementary Lessons in Anatomy* (Macmillan & Co.) will be found instructive. The interest of the subject is increased by a demonstration of the chief relations of the structure of man to that of other animals. Among the indispensable text-books treating of human anatomy as a whole are, Quain's *Elements of Anatomy* (Longmans & Co.), edited by Drs. Sharpey and Allen Thomson, and Dr. Schäfer; Gray's *Anatomy* (Longmans), edited by Mr. Holmes; and Wilson's *Anatomist's Vade-Mecum*, tenth edition, by Dr. G. Buchanan and Mr. H. E. Clark of Glasgow (J. & A. Churchill). The first volume of a work on *Human Morphology, a Treatise on Practical and Applied Anatomy*, by Mr. H. A. Reeves (Smith, Elder, & Co.), has appeared. For use in the dissecting-room, Ellis's *Demonstrations of Anatomy* (ninth edition, Smith, Elder, & Co.) has long established its claim as a trustworthy guide. It contains reduced copies of plates in the author's *Illustrations of Dissections* — a work which is most valuable for assistance. Other good books for dissectors are Mr. Christopher Heath's *Practical Anatomy* (fifth edition, J. & A. Churchill); Dr. Carrington's *Manual of Dissections of the Human Body* (George Bell & Sons); Holden & Langton's *Manual of the Dissection of the Human Body* (fourth edition, J. & A. Churchill); Dr. Cleland's *Directory for the Dissection of the Human Body* (second edition, Smith, Elder, & Co.); a *Dissector's Guide*, with illustrations, by Dr. D. J. Cunningham (Maclachlan & Stewart), and Mr. Bruce Clarke's *Dissector's Manual* (Cassell & Co.). Messrs. Hensman & Fisher's *Anatomical Outlines for the Use of Students in the Dissecting-room and Surgical Class-room* (Longmans & Co.) are useful. Talver's *Surgical Applied Anatomy* and Curner's *Medical Applied Anatomy* are useful text-books. Braune's *Atlas of Topographical Anatomy*, translated and edited by Mr. Bellamy (J. & A. Churchill), is a valuable book for reference. The drawings are made from plane sections of foreign bodies. There are also Professor W. Turner's *Atlas of Human Anatomy* (A. Johnston), Bock's *Atlas of Human Anatomy* (Renshaw), Mr. Godlee's *Atlas of Human Anatomy* (J. & A. Churchill), and Allen & Shakespeare's *System of Human Anatomy* (Henry Kimpton), also Mr. Flower's *Diagrams of the Nerves of the Human Body* (third edition, J. & A. Churchill). *A Descriptive Atlas of Anatomy*, by Mr. Noble Smith, has been published by Smith, Elder, & Co. There are also the well-known *Quain and Wilson's Anatomical Plates* (Smith, Elder, & Co.). Mr. Thomas Cooke's *Tablets of Anatomy and Physiology* (second edition) contain much information in a condensed form, and give useful aid in the study of the larger works. To students interested in the study of Zoology and Comparative Anatomy we would recommend, as works that will give much information without being too large or costly, Mr. Flower's *Osteology of the Mammalia* (Macmillan & Co.), and Dr. H. A. Nicholson's *Manual of Zoology*, and *Advanced Text-Book of Zoology* (Blackwood); as well as Huxley's *Manuals of the Anatomy of Vertebrated and Invertebrated Animals* (J. & A. Churchill), Huxley and Martin's *Practical Biology*, and Dr. Macalister's *Manuals of Zoology of the Invertebrate and of the Vertebrate Animals* (Longmans & Co.). Professor Gegenbauer's *Elements of Comparative Anatomy*, translated by Mr. F. J. Bell (Macmillan & Co.), is a very complete work. For the study of Embryology, the chapter by Dr. Allen Thomson in Quain's *Anatomy*, or the *Elements of Embryology*, by Dr. M. Foster and Mr. Balfour (second edition, Macmillan & Co.), should be consulted. The subject has been most ably treated by the late Mr. Balfour in a *Treatise on Comparative Embryology* (Macmillan & Co.).

For instruction in Histology, Mr. Schäfer's *Course of Practical Histology* (Smith, Elder, & Co.), Dr. Stirling's *Text-Book of Practical Histology* (Smith, Elder, & Co.), Dr. Klein's *Elements of Histology* (third edition, Cassell & Co.), and Dr. Heneage Gibbes' *Practical Histology and Pathology* (second edition, H. K. Lewis) are excellent guides; as is also the chapter on General Anatomy in Quain's *Anatomy*. A third edition of Dr. Rutherford's *Outlines of Practical Histology* (J. & A. Churchill) is in course of preparation. The *Atlas of Histology*, by Dr. E. Klein and Mr. Noble Smith (Smith, Elder, & Co.), is a valuable work for reference. Other works which will be found useful are Professor Stricker's collection of essays on *Human and Comparative Histology* (New Sydenham Society), Heinrich Frey's *Histology and Histo-chemistry of Man*, translated by Mr. Barker (J. & A. Churchill), and Dr. Satterthwaite's *Manual of Histology* (Sampson Low & Co.).

In Physiology, the beginner will find trustworthy guides in Huxley's *Lessons in Elementary Physiology* and Huxley and Martin's *Elementary Biology* (both published by Macmillan & Co.); and, as text-books for use in medical schools, Dr. McKendrick's *Outlines of Physiology in Relation to Man* (Maclehose, Glasgow; and Macmillan & Co.), Kirkes's *Handbook of Physiology*, edited by Mr. Morrant Baker and Dr. V. D. Harris (eleventh edition, John Murray), and Dr. Michael Foster's *Text-book of Physiology* (fourth edition, Macmillan & Co.) are to be recommended; and for more advanced students, Dr. L. Hermann's *Elements of Physiology*, translated by Professor Gamgee (second edition, Smith, Elder, & Co.), Flint's *Text-Book of Human Physiology* (H. K. Lewis), and Dr. Carpenter's *Principles of Human Physiology*, by Mr. Power (ninth edition, J. & A. Churchill). The increased study in recent years of Practical Physiology has led to the publication of several guides to this department. Dr. Burdon Sanderson has prepared a manual of *Practical Exercises in Physiology* (second edition, H. K. Lewis). *An Elementary Course of Practical Physiology*, by Dr. M. Foster and Mr. Langley (Macmillan & Co.) is also a book that can be recommended to beginners; while the more elaborate *Handbook for the Physiological Laboratory*, by Drs. Sanderson, Klein, Foster, and Brunton (J. & A. Churchill), is more fitted for those who desire an extended knowledge of practical physiology.

As guides in the use of the Microscope, there are Dr. Beale's *Microscope in Medicine*, Dr. Carpenter on the *Microscope* (sixth edition, J. & A. Churchill), Wythe's *Microscopist's Manual* (third edition, J. & A. Churchill), Marsh's *Microscopical Section Cutting* (second edition, J. & A. Churchill), Martin's *Manual of Microscopic Mounting* (second edition, J. & A. Churchill).

CHEMISTRY.

In Chemistry, among the most approved text-books, are Fownes' *Manual of Chemistry*, edited, in two volumes, *Inorganic and Organic*, by Mr. Watts (twelfth edition, J. & A. Churchill); Roscoe's *Lessons in Elementary Chemistry*; Miller's *Elements of Chemistry* (Longmans & Co.); Bloxam's *Chemistry, Inorganic and Organic* (fifth edition, J. & A. Churchill); Williamson's *Chemistry for Students* (Macmillan & Co.); Watt's *Physical and Inorganic Chemistry* (J. & A. Churchill); and Tidy's *Handbook of Modern Chemistry* (J. & A. Churchill). A little book by Mr. R. M. Murray, entitled *Chemical Notes and Equations for the Use of Students* (Maclachlan & Stewart), gives an useful outline of the fundamental principles of chemical science. An elaborate *Treatise in Chemistry*, by Professors Roscoe and Shorlemmer, of Owens College, Manchester, is published by Macmillan & Co.; Bowman and Bloxam's *Practical Chemistry*, seventh edition (J. & A. Churchill) has an established reputation as a practical guide.

For instruction in Physiological Chemistry, there are Dr. T. C. Charles's *Elements of Physiological and Pathological Chemistry* (Smith, Elder, & Co.) and Dr. Ralfe's *Outlines of Physiological Chemistry* (H. K. Lewis). Dr. Arthur Gamgee is the author of a *Text-book of the Physiological Chemistry of the Animal Body* (Macmillan & Co.), of which the first volume has been published. A second edition of Dr. Thudichum's *Pathology of the Urine* has been published by J. & A. Churchill.

BOTANY.

The text-books of Botany in most general use are Bentley's *Manual of Botany* (fourth edition, J. & A. Churchill); Bentley's *Student's Guide to Botany* (Churchill); Henfrey's *Elementary Course of Botany*, third edition, by Dr. M. T. Masters (Van Voorst); Balfour's *Manual of Botany* (A. & C. Black); Oliver's *Lessons in Elementary Botany* (Macmillan & Co.); Thome's *Botany*, translated by Bennett; Prantl and Vine's *Text-book of Botany*. Sach's *Text-book of Botany*, translated by Mr. A. W. Bennett and Mr. W. T. Dyer (Macmillan & Co.) is a valuable work of reference in regard to Structural and Physiological Botany. Bentley and Trimen's admirable plates of *Medicinal Plants* (J. & A. Churchill) should be consulted by the student both of Botany and Materia Medica.

MATERIA MEDICA AND THERAPEUTICS.

A well-known and useful book as a manual of materia medica is Dr. Garrod's *Essentials of Materia Medica and Therapeutics*, edited by Dr. Buchanan Baxter (sixth edition, Longmans & Co.) It requires, however, to be supplemented by a treatise on therapeutics, for which purpose Dr. Ringer's *Handbook of Therapeutics* (tenth edition, H. K. Lewis), Dr. Waring's *Manual of Practical Therapeutics* (third edition, J. & A. Churchill), Dr. Farquharson's *Guide to Therapeutics* (third edition, Smith, Elder, & Co.), and Dr. Spark's edition of Binz's *Elements of Therapeutics* (J. & A. Churchill) are to be recommended. Dr. Milner Fothergill's *Practitioner's Handbook of Treatment* (second edition, Macmillan & Co.) will be of value to those who are interested in the endeavour to show the agreement between science and practice. Dr. H. C. Wood's *Treatise on Therapeutics* (Smith, Elder, & Co.) pays special attention to the therapeutic action of drugs. Other useful books are Dr. W. G. Smith's *Commentary on the British Pharmacopœia* (Smith, Elder, & Co.), Royle and Harley's *Manual of Materia Medica and Therapeutics* (sixth edition, J. & A. Churchill), Neligan's *Medicines*, edited by Mr. Macnamara (Fannin & Co.), Dr. Phillips's *Materia Medica and Therapeutics* (J. & A. Churchill), Dr. Whitla's *Materia Medica, Therapeutics, and Practical Pharmacy* (new edition, Renshaw), Dr. Scoresby-Jackson's *Note-book of Materia Medica*, edited by Dr. Moinet (fourth edition, Machlachlan & Stewart; and Simpkin, Marshall, & Co.). Dr. Handsel Griffiths's *Materia Medica and Pharmacy*, edited by Dr. Duffey (Baillière, Tindal, & Cox; and Fannin & Co., Dublin), Dr. R. Bartholow's *Practical Treatise on Materia Medica and Therapeutics* (fifth edition, H. K. Lewis), Thorowgood's *Student's Guide to Materia Medica* (second edition, J. & A. Churchill), Craig's *Manual of Materia Medica and Therapeutics* (fourth edition, Livingstone, Edinburgh; and Simpkin, Marshall, & Co.), Dr. Phillips's *Materia Medica and Therapeutics* (J. & A. Churchill), and Dr. Isambard Owen's manual of *Materia Medica* (J. & A. Churchill), Dr. Lauder Brunton's *Tables of Materia Medica* (new edition, Smith, Elder, & Co.) form a most comprehensive and valuable syllabus, and will be very useful to the student. Dr. W. H. Griffiths's *Lessons on Prescriptions, and the Art of Prescribing* (Macmillan & Co.) is an useful work. Messrs. Bentley & Trimen's *Medicinal Plants* has been mentioned under the head of Botany.

As text-books in the application of Electricity to Medicine, besides Dr. Althaus's *Treatise on Medicinal Electricity* (Longmans & Co.), the following are likely to prove useful to students:—a *Text-Book of Electricity in Medicine and Surgery*, by Dr. G. V. Poore (Smith, Elder & Co.); a *Handbook of Medical and Surgical Electricity*, and *How to Use a Galvanic Battery*, by Dr. H. Tibbitts (second edition, J. & A. Churchill); Dr. A. de Watteville's *Practical Introduction to Medical Electricity* (second edition, H. K. Lewis); Dr. Roberts Bartholow's *Medical Electricity* (Kimpton); and Dr. Hughes Bennett's *Electro-Diagnosis in Diseases of the Nervous System* (Lewis).

PATHOLOGY.

As a manual of Pathology, Dr. T. H. Green's *Introduction to Pathology and Morbid Anatomy* (Renshaw) has gained a deservedly high reputation. The *Lectures on Pathological Anatomy* of Drs. Wilks and Moxon (second edition, J. & A. Churchill), and Dr. J. F. Payne's improved edition of Jones and Sieveking's *Manual of Pathological Anatomy* (J. & A. Churchill), are also good books. A second edition of an English translation of *Post Mortem Examinations: the Method of Performing them*, is published by J. & A. Churchill. Messrs. Smith, Elder, & Co. have published a *Manual of Necropsy*, by Dr. A. H. Newth, which is intended as a guide to the performance of *post mortem* examination. A work on *Surgical Pathology* by Mr. A. J. Pepper (Cassell & Co.) is announced. We would also strongly recommend students to consult, and to possess, if possible, Rindfleisch's *Manual of Pathological Histology*,

edited by the New Sydenham Society. Other highly valuable works for reference are Dr. Greenfield's translation of Lancereaux's *Atlas of Pathological Anatomy* (J. & A. Churchill), and an English translation by Mrs. Ernest Hart of a *Manual of Pathological Anatomy*, by Cornil and Ranvier (Smith, Elder, & Co.).

MEDICINE.

FOR the student who is commencing his clinical studies there are several very good guide-books. Among them are Dr. A. W. Barclay's *Manual of Medical Diagnosis* (third edition, J. & A. Churchill), Dr. S. Fenwick's *Student's Guide to Medical Diagnosis* (fifth edition, J. & A. Churchill; Dr. O. Sturges' *Introduction to the Study of Clinical Medicine* (Smith, Elder, & Co.); Dr. Finlayson's *Clinical Manual for the Study of Medical Cases* (Smith, Elder, & Co.); Dr. J. Little's *Note-book for Students beginning the Study of Disease at the Bedside* (third edition, Fannin & Co.); and Dr. Warner's *Student's Guide to Medical Case-taking* (J. & A. Churchill.) More advanced students and practitioners may consult with advantage Dr. Da Costa's *Medical Diagnosis* (third edition, Smith, Elder, & Co.). As a guide in physical diagnosis, Dr. Gee's *Auscultation and Percussion* (third edition, Smith, Elder, & Co.) may be safely trusted; also Dr. S. West's *How to Examine the Chest.* Other useful books for the same purpose are Dr. Flint's *Manual of Percussion and Auscultation* (J. & A. Churchill); Dr. Reginald Thompson's *Physical Examination of the Chest in Health and Disease* (H. Renshaw).

Among text-books in General Medicine, which may be recommended for the use of the student, are Dr. F. T. Roberts's *Handbook of the Theory and Practice of Medicine* (fifth edition, Smith, Elder, & Co.), Dr. Tanner's *Practice of Medicine* (edited by Dr. Broadbent), Dr. Aitken's *Science and Practice of Medicine* (seventh edition, C. Griffin & Co.); Dr. H. Hartshorne's *Essentials of the Principles and Practice of Medicine* (fifth edition, Smith, Elder, & Co); Dr. Aitken's *Outlines of the Science and Practice of Medicine* (second edition, C. Griffin & Co.); Dr. Flint's *Principles and Practice of Medicine* (fifth edition, Kimpton); Dr. Roberts Bartholow's *Treatise on the Practice of Medicine* (fifth edition, H. K. Lewis); Dr. Charteris's *Student's Guide to the Practice of Medicine* (third edition, J. & A. Churchill); and Dr. A. Carter's *Elements of Practical Medicine* (second edition, Lewis). The advanced student and the practitioner will do well to consult Dr. Russell Reynolds' *System of Medicine* (five volumes, Macmillan & Co.); Trousseau's *Lectures on Clinical Medicine* (New Sydenham Society); Ziemssen's *Cyclopædia of the Practice of Medicine* (Sampson Low & Co.); Dr. Niemeyer's *Text-Book of Practical Medicine* (H. K. Lewis); Sir Thomas Watson's *Lectures on the Principles and Practice of Physic* (Longmans & Co.)

SURGERY.

MR. ERICHSEN'S *Science and Art of Surgery* (eighth edition, Longmans & Co.), Mr. Holmes's *Surgery—its Principles and Practice* (fourth edition, Smith, Elder, & Co.), Mr. Bryant's *Practice of Surgery* (fourth edition, J. & A. Churchill), and Mr. Gant's *Science and Practice of Surgery* (second edition, Baillière, Tindall, & Cox), are all very complete works, one of which should be in the possession of the student. For those who prefer smaller and more condensed works, there is the well-known Druitt's *Surgeon's Vade-Mecum* (eleventh edition, J. & A. Churchill). Mr. Christopher Heath has brought out a *Student's Guide to Surgical Diagnosis* (second edition, J. & A. Churchill). Among the works more specially devoted to practical surgery, a foremost place is held by the late Sir William Fergusson's *System of Practical Surgery* (fifth edition, J. & A. Churchill). Other books which may be consulted with advantage are, Mr. Holmes's *System of Surgery* (Longmans & Co.), Mr. Spence's *Lectures on Surgery* (A. & C. Black), Dr. S. D. Gross's *System of Surgery* (sixth edition, Smith, Elder, & Co.), and Billroth's *Lectures on Surgical Pathology and Therapeutics* (New Sydenham Society). Mr. Watson Cheyne's *Antiseptic Surgery* (Smith, Elder, & Co.) is a standard work on the subject of which it treats.

For the guidance of the student who is being instructed in practical and operative surgery, there are several good books. Mr. Christopher Heath's *Manual of Minor Surgery and Bandaging* (seventh edition, J. & A. Churchill) has for several years enjoyed a high reputation. The *Manual of Operative Surgery on the Dead Body*, by Mr. Thomas Smith and Mr. Walsham (Longmans & Co.); Mr. Berkeley Hill's *Essentials of Bandaging* (fifth edition, Lewis); Mr. Bellamy's *Student's Guide to Surgical Anatomy* (second edition, J. & A. Churchill); Mr. Joseph Bell's *Manual of the Operations of Surgery* (fourth edition, Maclachlan & Stewart); and Stimson's *Operative Surgery* (Lewis), are also works which can be recommended. A *Manual of Regional Surgery*, by Mr. F. A. Southam (J. & A. Churchill), is in course of publication, and a *Manual of Operative Surgery*, by Dr. Joseph D. Bryant, has also appeared (Bermingham & Co.) Other larger works most valuable for reference—and to be procured by the student if possible—are Mr. Jonathan Hutchinson's *Illustrations of Clinical Surgery*, consisting of plates, woodcuts, &c., illustrating surgical diseases, symptoms, accidents, operations, &c. (published in fasciculi by J. & A. Churchill); Mr. C. Heath's *Course of Operative Surgery*, with coloured plates by M. Leveillé (J. & A. Churchill); and Mr. Norton's edition of Bernard and Huette's *Text-Book of Operative Surgery* (Baillière, Tindall, & Cox); and Dr. Steven Smith's *Manual of the Principles and Practice of Operative Surgery* (Sampson Low & Co.). For the student of Military Surgery, Surgeon-General Longmore's work on *Gunshot Injuries* (Longmans & Co.), and Surgeon-Major Porter's *Surgeon's Pocket-Book* (second edition, C. Griffin & Co.), are essential. A translation, by Mr. Clutton, of Professor Esmarch's *Surgeon's Handbook on the Treatment of Wounded in War* (Sampson Low & Co.) is also a valuable work.

MIDWIFERY; AND DISEASES OF WOMEN AND CHILDREN.

THE text-books of Obstetric Medicine which hold the first place in the present day are, Dr. W. S. Playfair's *Treatise on the Science and Practice of*

Midwifery (fourth edition, Smith, Elder, & Co.); and Dr. Leishman's *System of Midwifery* (third edition, J. Maclehose, Glasgow; and Macmillan & Co.) Every student should have one or the other of these. There is also Dr. W. T. Lusk's *Science and Art of Midwifery* (H. K. Lewis). For those who prefer smaller books, Dr. D. Lloyd Roberts's *Student's Guide to the Practice of Midwifery* (second edition, J. & A. Churchill) will be useful; there are also Dr. Alfred Meadows's *Manual of Midwifery* (Renshaw); Milne's *Manual of Midwifery* (second edition, Livingstone, and Simpkin, Marshall, & Co.); and Dr. C. H. Carter's translation of Schröder's *Manual of Midwifery* (J. & A. Churchill). Drs. Robert and Fancourt Barnes have brought out the first volume of a *Handbook on Obstetrics* (Smith, Elder, & Co.). As a work of illustrations, Dr. Martin's *Atlas of Obstetrics and Gynæcology*, edited by Dr. Fancourt Barnes (H. K. Lewis), is to be recommended. Dr. J. G. Swayne's *Obstetric Aphorisms* (seventh edition, J. & A. Churchill) are very useful. Dr. Robert Barnes has issued a *Synoptical Guide to the Study of Obstetrics* (Smith, Elder, & Co.), which will be found useful as an aid to study. Dr. Barnes's *Lectures on Obstetric Operations* (third edition, J. & A. Churchill) should be in the possession of every advanced student and general practitioner; as should also the *Clinical History of the Medical and Surgical Diseases of Women*, by the same author (second edition, J. & A. Churchill). Dr. West's *Lectures on the Diseases of Women* (fourth edition, with additions by Dr. Matthews Duncan, J. & A. Churchill); Dr. Graily Hewitt's *Diagnosis and Treatment of Diseases of Women* (third edition, Longmans & Co.); Dr. Matthews Duncan's *Clinical Lectures on the Diseases of Women* (second edition, J. & A. Churchill); the late Dr. F. Churchill's work on the *Diseases of Women* (sixth edition, Fannin & Co.); Dr. Edis's *Diseases of Women* (second edition, Smith, Elder, & Co.); Mr. Lawson Tait's *Diseases of Women* (Williams & Norgate); Dr. Emmet's *Principles and Practice of Gynæcology* (second edition, J. & A. Churchill); Dr. Gaillard Thomas's *Practical Treatise on the Diseases of Women* (fifth edition, Kimpton); Dr. Heywood Smith's *Practical Gynæcology* (J. & A. Churchill); and Sir J. Spencer Wells's treatise on *Ovarian and Uterine Tumours* (J. & A. Churchill), Dr. Macnaughton Jones's *Manual of Diseases of Women and Uterine Therapeutics* (Baillière, Tindall, & Cox); and Mr. Lawson Tait's *Diseases of the Ovaries*, are all valuable books. Other books which will be found useful are Dr. Galabin's *Student's Guide to Diseases of Women* (third edition, J. & A. Churchill); Hart and Barbour's *Manual of Gynæcology* (second edition, Johnston); Dr. Halliday Croom's *Minor Gynæcological Operations and Appliances* (Livingstone, Edinburgh; and Simpkin, Marshall, & Co); and Dr. Courty's work on the *Diseases of the Uterus, Ovaries, and Fallopian Tubes*, translated by Dr. Agnes Maclaren (J. & A. Churchill).

Among text-books on Diseases of Children, must be mentioned Dr. West's well known *Lectures on the Diseases of Infancy and Childhood* (Longmans & Co.); Dr. Fleetwood Churchill's treatise on *The Diseases of Children* (third edition, Fannin & Co.); Dr. W. H. Day's *Manual on the Diseases of Children* (J. & A. Churchill); M. Guersant's *Surgical Diseases of Infants and Children*, translated by Dr. Dunglison (Smith, Elder, & Co.); Meigs and Pepper's *Practical Treatise on the Diseases of Children* (H. K. Lewis); Dr. Eustace Smith's *Practical Treatise on Diseases in Children* (J. & A. Churchill); Dr. J. L. Smith's *Treatise on the Diseases of Infancy and Childhood* (fifth edition, H. K. Lewis); Dr. Tanner and Dr Meadows' *Practical Treatise on Diseases of Infancy and Childhood* (third edition, H. Renshaw); and Steiner's *Compendium of the Diseases of Children*, translated by Mr. Lawson Tait (J. & A. Churchill).

SPECIAL SUBJECTS.

There are several good text-books of the special departments which are taught in the schools.

For students of Psychological Medicine, the chief work is Bucknill and Tuke's *Manual of Psychological Medicine* (fourth edition, J. & A. Churchill). There are also Dr. Clouston's *Clinical Lectures on Mental Diseases* (J. & A. Churchill); and Dr. E. C. Mann's *Manual of Psychological Medicine and Allied Nervous Diseases* (J. & A. Churchill); and Dr. W. H. O. Sankey's *Lectures on Mental Diseases* (H. K. Lewis).

For students of Ophthalmic Surgery, Mr. R. D. Carter's *Treatise on Diseases of the Eye* (Macmillan & Co.); Mr. Nettleship's *Student's Guide to Diseases of the Eye* (second edition, J. & A. Churchill); Mr. Macnamara's *Manual of Diseases of the Eye* (fourth edition, J. & A. Churchill); Mr. Wharton Jones's *Manual of Ophthalmic Medicine and Surgery* (third edition, J. & A. Churchill); Mr. George Lawson's *Diseases and Injuries of the Eye* (fourth edition, Renshaw); Dr. H. W. Williams's *Diagnosis and Treatment and Diseases of the Eye* (Sampson Low & Co.); Mr. B. T. Lowne's *Handbook of Ophthalmic Surgery* (Smith, Elder, & Co.); Mr. Juler's *Handbook of Ophthalmic Science and Practice* (Smith, Elder, & Co.), are books that will be useful. Messrs. Churchill have also published the second edition of a little book by Mr. Charles Higgens, entitled *Hints on Ophthalmic Out-patient Practice.* Dr. de Wecker's *Ocular Therapeutics*, translated by Dr. Litton Forbes (Smith, Elder, & Co.); and Dr. Wolfe's work on *Diseases and Injuries of the Eye* (J. & A. Churchill), may be consulted with advantage. A second edition of a book by Mr. E. A. Brown, of the Liverpool Ear and Eye Infirmary, for instructing students *How to Use the Ophthalmoscope* (Trübner & Co.) is in preparation; *Manual and Atlas of Medical Ophthalmoscopy*, by Dr. Gowers (second edition, J. & A. Churchill), is a valuable work.—

In Aural Surgery, Mr. Dalby's book on *Diseases and Injuries of the Ear* (second edition, J. & A. Churchill) is very good; there is also a book by Mr. G. P. Field on *Diseases of the Ear* (third edition, Renshaw), and a *Manual of Diseases of the Ear* by Dr. T. Barr (Maclehose, Glasgow; and Macmillan, London); while Dr. Burnett's work on *The Ear: its Anatomy, Physiology, and Diseases* (J. & A. Churchill), and Dr. St. John Roosa's *Practical Treatise on Diseases of the Ear* (fourth edition, H. K. Lewis) are valuable and elaborate works. Dr. Macnaughton Jones has brought out a good *Practical Treatise on Aural Surgery* (second edition, J. & A. Churchill), and also a well-executed *Atlas of the Diseases of the Membrana Tympani and Auricle* (J. & A. Churchill).

For the use of students in Dermatology, there is the late Dr. Tilbury Fox's treatise on *Skin-*

Diseases, their Description, Pathology, Diagnosis and Treatment (new edition, H. Renshaw) Mr. Malcolm Morris's *Manual of Skin-Diseases* is a very reliable guide. Sir Erasmus Wilson's *Treatise on Diseases of the Skin*, and his *Lectures on Dermatology* (J. & A. Churchill) are well-known and valuable works. Dr. Pullar has translated the *Text-Book of Skin-Diseases*, by Dr. Neumann of Vienna (Hardwicke & Bogue). Dr. R. Liveing's *Handbook on the Diseases of the Skin* (third edition, Longmans & Co.) is well deserving of recommendation; so also is Dr. McCall Anderson's *Treatment of Diseases of the Skin* (Macmillan & Co.). *A Practical Treatise on Diseases of the Skin*, by Dr. J. Nevins Hyde (J. & A. Churchill) has lately been published. Dr. Tilbury Fox has supplied an excellent *Atlas of Skin-Diseases* (Renshaw); while a work with a similar title by Dr. Duhring, of Philadelphia (Lippincott & Co.), is also very good.

For students of Dental Surgery, the following books published by Messrs. J. & A. Churchill: Tomes's *Manual of Dental Surgery* (second edition); Tomes's *Manual of Dental Anatomy* (second edition); Taft's *Practical Treatise on Operative Dentistry* (third edition); Sewill's *Student's Guide to Dental Anatomy and Surgery* (second edition, Churchill); Stocken's *Elements of Dental Materia Medica and Therapeutics* (third edition); and Coles's *Manual of Dental Mechanics* (second edition). A *Manual of Dental Surgery and Pathology*, by Mr. A. Coleman, has been published by Smith, Elder, & Co.

FORENSIC MEDICINE AND HYGIENE.

As elementary works of convenient size, and containing valuable instruction, Dr. A. S. Taylor's *Manual of Medical Jurisprudence* (tenth edition, J. & A. Churchill), Husband's *Medical Jurisprudence and Public Health* (private edition, Livingstone, and Simpkin, Marshall, & Co.), and Guy and Ferrier's *Principles of Forensic Medicine* (Renshaw) are to be recommended. The more advanced student and the practitioner should consult Dr. Taylor's *Principles and Practice of Medical Jurisprudence* (third edition, by Dr. Stevenson, J. & A. Churchill); the *Handbook of Forensic Medicine and Toxicology*, by the late Dr. Bathurst Woodman and Dr. Tidy (J. & A. Churchill); Dr. Ogston's *Lectures on Medical Jurisprudence* (J. & A. Churchill); and the translation of Casper's *Forensic Medicine*, published by the New Sydenham Society. The last-named book describes the manner in which medico-legal investigations are carried out on the Continent. Dr. C. M. Tidy's work on *Legal Medicine* (Smith, Elder, & Co.) is a valuable book.

Under the head of Hygiene the principal books are, Dr. Parkes's *Manual of Practical Hygiene*, edited by Prof. de Chaumont (sixth edition, J. & A. Churchill); Wilson's *Handbook of Hygiene and Sanitary Science* (fifth edition, J. & A. Churchill); Dr. A. H. Buck's *Treatise on Hygiene and Public Health* (Sampson Low & Co.); Prof. de Chaumont's *Lectures on State Medicine* (Smith, Elder, & Co.); Hart's *Manual of Public Health* (Smith, Elder, & Co.); and Hart's *Truth about Vaccination* (Smith, Elder, & Co.). Several excellent essays on hygienic subjects, by Sir H. W. Acland, Dr. Corfield, Mr. Pridgin Teale, Captain Douglas Galton, Dr. G. V. Poore, Mr. Eassie, and other well-known authorities, are in course of publication in connection with the International Health Exhibition.

REVIEWS.

ARTICLE 3159.

The Collective Investigation Record. Edited by the Collective Investigation Committee of the British Medical Association; Professor Humphry, M.D., F.R.S., Chairman. Vol. II. July 1884. Published by the British Medical Association, 161A Strand.

To put a young organisation to the test of results, to judge it by what it has already accomplished, is to subject it to a severe trial; a trial that disregards the likelihood of future development and the promise of increasing fertility. Yet even such a test as this might be confidently faced by the great organisation, not yet three years old, for the Collective Investigation of Disease.

The second annual volume of the *Collective Investigation Record* has just been issued, and its pages exhibit a kind of work that could not readily have been carried out by individual labour alone.

The subjects dealt with in the present volume are pneumonia and puerperal pyrexia. There are also memoranda concerning paroxysmal hæmoglobinuria, old age, and albuminuria in apparently healthy persons. In addition to the report on pneumonia by the committee, there are original communications on the same subject by various independent observers.

The report by the committee is in two parts. The first deals with epidemics of pneumonia, both British and foreign; the second portion is an analysis of the replies given to the card issued by the committee. The account of epidemics of pneumonia is an admirably concise article, with bibliographical references, by Dr. Sidney Coupland. Cases are classified under three headings. 1. *Epidemic pneumonia*, occurring in districts or houses after the manner of epidemic catarrh. 2. *Pythogenic pneumonia*, occasioned by sewer-gas, fæcal accumulation, overcrowding, &c., and apt to affect several individuals so exposed. 3. *Infectious pneumonia*, imported into a house or district, and spreading from person to person. The existence of cases coming under the first two headings is placed beyond doubt, not merely by instances previously published, but by an analysis of the replies given to the card of inquiry. Cases of the third variety, though rare, must be considered also to be fairly well established.

Amongst the many interesting points raised by analysis of the answers to the questions, one or two may be noticed briefly. Perhaps the first thing that will strike most people is that we had so little to learn about pneumonia, and that most of our previous knowledge on the subject remains unshaken. This, of course, so far from being a reproach to collective investigation, is merely a subject of congratulation for ourselves.

The mortality in 1,065 cases recorded was 192, or about 18 per cent. The mortality of total abstainers was 10·4 per cent.; of the temperate, 17·4 per cent.; of the intemperate, 42·8 per cent. Intemperance in drink appears to be chargeable not merely with a high mortality, but with actually causing the disease; and the same is true of mental depression and fatigue. Apex pneumonia is not especially fatal. Touching the tendency of other disease to cause pneumonia, it may be mentioned that the record of

previous illnesses is strikingly scanty. A previous attack of pneumonia, however, occurred once in every nine or ten cases. Acute rheumatism is a very rare antecedent. There does not appear to be any inherited or family tendency to the disease.

Epidemics of pneumonia are recorded by Surgeon-major Maunsell and by Dr. Finlayson. Dr. Longstaff communicates a memorandum on the incidence of fatal pneumonia. A thoughtful and able article on the micro-organisms of pneumonia by Dr. G. M. Giles will probably excite further attention. Three forms, regarded as different stages of the micrococcus, are described. At first, minute spherical or pear-shaped bodies, about 1-27,000th inch in diameter, are seen. They are free, devoid of nucleus, and if examined quickly enough they exhibit Brunonian movement. Later, they adhere in chains of from two to ten individuals. After a day or two, a larger spherical nucleated form makes its appearance. A third form, 1-1,000th inch or more in size, apparently consisting of a congeries of the smaller kind united by a hyaline material, then shows itself. These micrococci have a strong tendency to adhere to the red blood-corpuscles; and thus give to the corpuscles a mulberry-like appearance. Dr. Giles suggests that many of the recently discovered disease-germs may be only varieties of common soil and water organisms, the variety depending on the changed conditions of its existence, quite foreign, perhaps, to its usual habits. That pneumonia is more common in winter than in summer, Dr. Giles thinks, is to be ascribed to the fact that in winter ventilation is abjured, and that by the re-breathing of air a suitable pabulum is afforded to the parasite. Finally, Dr. Giles considers pneumonia a zymotic disease; under certain conditions it becomes epidemic; and when epidemic it may be infectious.

The report on puerperal pyrexia is a preliminary one; and is based on the examination of 354 cases. The cases are classified according to their causation. The average mortality of the whole number of cases was 47·4 per cent. A very curious circumstance is that cases complicated by actual scarlatina, erysipelas, measles, rötheln, and variola had not a high mortality, whilst those occurring after exposure to the contagion of scarlatina, erysipelas, enteric fever, and puerperal septicæmia, without showing any symptoms of the disease, all showed mortality very much greater than the average. Thus the mortality where there was actual scarlatina was 25 per cent.; where there was only the contagion, 57·1 per cent. In actual erysipelas the mortality was 37·5 per cent.; from the contagion of erysipelas without the symptoms, the mortality was 83·3 per cent. The returns do not afford any certain conclusions in regard to treatment.

In conclusion, it may be remarked that much of the value of the *Collective Investigation Record* lies in the fact that it states not merely the inferences, but the facts from which the inferences are drawn; so that anyone who wishes to examine and to criticise the results starts on level terms with the committee. Amongst the advantages likely to result from Collective Investigation is the habit it encourages of keeping a record of cases—a habit that will in itself do a great deal to quicken observation and to make knowledge precise and accurate.

WILLIAM R. HUGGARD, M.D.

ARTICLE 3160.

Memoria Sulla Cura dell' Ectropio Cicatriziale. Pel DOTT. RAF. CASTORANI. (*The Treatment of Cicatricial Ectropion.* By PROFESSOR CASTORANI, Naples.)

THE results of Professor Castorani's operation in 58 cases were complete cure in 45 instances, with one relapse; incomplete cure in 8; death from erysipelas, 1; opaque staphyloma of cornea, 1; unknown, 3. The memoir is illustrated copiously with portraits of patients before the operation and after. WILLIAM R. HUGGARD, M.D.

ARTICLE 3161.

Medical Education and the Regulation of the Practice of Medicine in the United States and Canada. Prepared by the Illinois State Board of Health, and published by permission of the Board. Revised and Corrected to March 1, 1884. Pp. 270. Chicago: W. T. Keener; London: Trübner & Co. 1884.

THIS work is the result of the action taken in 1880 by the Illinois State Board of Health, when a committee was appointed to formulate a schedule of educational requirements and methods, by which the good standing of medical colleges might be determined for the purpose of their recognition or otherwise by the State. Each State in America has, as is well known, its own laws; and, in medical matters, legislative enactments vary greatly in extent and in quantity. Hence an elaborate inquiry was instituted by the Illinois Board, and the result is the volume before us.

The Board has prepared a schedule of the minimum requirements for a medical college to be held in good standing, so that its diplomas may be recognised for qualification in Illinois. Among the requirements are diplomas of graduation in Arts, or an examination in the branches of a good English education—including Mathematics, English Composition, and Elementary Physics; professional study for not less than three years before graduation, dissection during two courses, attendance on at least two terms on clinical and hospital instruction, and attendance on at least two full courses of lectures delivered in sessions of not less than twenty weeks each.

The States are arranged in alphabetical order; and under each are given the population, the number of physicians and the proportion to population, the Act (if any) by which the practice of medicine is regulated, and information regarding the medical institutions, existing and extinct. Interesting notes by the correspondents of the Board in the various States are also occasionally added. Several carefully prepared summaries and tables complete the book.

The work contains a mass of information regarding medical legislation, education, and graduation in the United States, that we do not remember to have ever met with elsewhere; and it is a most valuable guide to all who are desirous of gaining knowledge of the matters of which it treats.

ARTICLE 3162.

What to do in Cases of Poisoning. By WILLIAM MURRELL, M.D. Fourth Edition. London: H. K. Lewis. 1884.

THE fourth edition of this excellent little book is just published, with many additions and important altera-

tions. The work is well arranged, commencing with an article on 'The Diagnosis of Cases of Poisoning,' in which a number of useful hints are given; various symptoms are taken as headings, and the poisons likely to produce them are grouped under these headings. Most of the well-known patent medicines are quoted, the supposed active ingredient in each being given. The author then goes on to describe what he terms an antidote bag, enumerating the various instruments and drugs it should contain. The poisons will be found arranged in alphabetical order, with a short description of those not commonly met with. The way in which the poison may be taken is next stated; the symptoms produced are enumerated; in many instances, the quantity necessary to prove fatal is mentioned; and then the methods of treatment are carefully examined in each case. No one need feel at all anxious when summoned to a case of poisoning, should he follow the directions given by Dr. Murrell. There is one great advantage in the book; as it is presented to the profession in a concise form, a practitioner can always carry it with him, and thus easily refresh his memory on his way to a case. Every medical man in active practice ought to provide himself with a copy of this excellent little work.

RICHARD NEALE, M.D.

ARTICLE 3163.

A Text-book of the Principles of Physics. By ALFRED DANIELL, M.D. London: Macmillan & Co. 1884.

WE have much pleasure in directing attention to this manual which, having been prepared for the special use of medical students, is particularly adapted for their use, and for that of the profession in general. In scope the work is somewhat encyclopædic, and objections may be felt to its size, as beyond the requirements of the class for which it is designed; but in justice to the author we must regard it as equally indicative of his desire to deal fully and fairly with his subject. The contents include, besides elementary chapters, kinematics, kinetics, the properties of matter, solids, liquids, and gases, heat, sound, ether waves, electricity, and magnetism. The text is fully illustrated by woodcuts, and the arrangement and technical execution of the volume are all that could be desired. Dr. Daniell's style is simple and clear, and though many of the subjects with which he has to deal are necessarily difficult to understand, it is at least due to him to say that this is not in any way increased by any obscurity or ambiguity in his mode of expression. We are sure this manual cannot fail to be appreciated by those who use it.

ROBERT SAUNDBY, M.D.

ARTICLE 3164.

On Tumours of the Bladder. By SIR HENRY THOMPSON. London: J. & A. Churchill. 1884.

WE are glad to see this work as an outcome of the special experience of a surgeon, whose opportunities in this line of work have been in all probability larger than any other living man. The subject formed a part of his lectures recently delivered before the Royal College of Surgeons, and has been more carefully and thoroughly treated in this book than could be done in the time allowed for the lectures.

As it stands now, the book is well prepared, clear, and to the point; and the illustrations are numerous and valuable, partly from their being good reproductions of pathological histology, and partly from the number of diagrams which suggest the probable arrangement and position of the tumour of the bladder in the reported cases, and at the same time indicate the advantage of sketching powers to a surgeon. Sir Henry Thompson is so well known as an artist that these diagrams, rough as they are, are especially valuable as helps to description, and as incentives to others to save laboured writing.

The work is divided into four chapters. In the first he treats of diagnosis, and gives clearly the chief points to be noticed in examining patients where there is reason to suspect disease of the bladder or urethra. Frequency of micturition, pain, when and where found, the occurrence of blood and the character of this abnormality, the character of the stream, the chemical character of the urine, and the signs of dropsy and other complications, are severally brought before notice, and then physical examination is urged.

He now refers to the case of tumour of the bladder, which gave rise in his mind to the wish to find a means of bringing vesical tumours within the reach of practical surgery. At the *post mortem* examination of a case in which suprapubic lithotomy had been performed for something producing cystitis, he found a pedunculated growth, which might have been easily removed if its existence had been known. He carefully worked out his means for bringing the bladder within reach of the finger. The operation is not a new one—he disclaims this fully; but its application for the purpose of diagnosing faults in the bladder is new and worthy of the author's reputation.

The operation is fully described in the second chapter, and is simply that of urethrotomy: opening the membranous urethra by a median perineal incision, so as to admit the finger into the bladder, the prostate not being incised. But in a fully given account of an operation such as we have here, should the slightest detail be omitted? and if not, is it the author's intention that the surgeon should 'introduce the left forefinger into the rectum,' and having retained it there during the operation, he should then 'slowly and gently insinuate it through the neck of the bladder,' when it freely explores the interior, without any word of caution against carrying fæcal matter with it?

But once there, one can understand the feelings of an ardent surgeon so forcibly expressed:—'I doubt whether the keenest hunter in quest of adventure or most indefatigable and hardy explorer of an unknown continent realises happier moments following success, than does the operator who, after protracted care and research, tracks to a hidden source the cause of certainly impending death, and is able to save the victim.'

We are glad to find that one of such large experience has found in only one instance that the perinæum was too deep to allow him to reach the whole of the internal surface of the bladder. This has been supposed to be a practical difficulty.

As regards the cases to be benefited by the operation besides those in which tumour is found, he mentions five classes:—(1) long continued chronic cystitis without traceable and removable cause; (2) chronic cystitis with prostatic hypertrophy, with aggravation of the cystitis from frequent catheterism; (3) impacted calculus or adherent calculous matter; (4) painful or frequent micturition

or bleeding without obvious cause, even after opening the bladder; (5) abnormal cases of adherent mucous membrane and of villous condition. These points are of importance, and might perhaps be more clearly separated from the question of tumour relief in any future edition.

In the third chapter he gives a careful account of the pathological character of tumours of the bladder which have come under his notice ; and in this has been ably assisted by younger pathologists, especially Dr. Heneage Gibbes, Mr. Shattock, Mr. Eve, and Mr. Stanley Boyd. The plates of microscopical appearances are numerous and good. The classification of the tumour is simple : (1) *homœoplastic*, or composed of elements identical with the normal tissues of the bladder ; (2) *heteroplastic*, composed, more or less, of abnormal elements. In the first are included (*a*) fimbriated papilloma ; (*b*) fibro-papilloma ; (*c*) tumours of transitional type. In the second class are the different forms of cancer. We are glad to see the term 'villous' discarded. It was applied to almost all forms of tumour, and often meant an accidental condition, and was misleading.

It is not obvious why a plate showing the mucous membrane of an ape's bladder has been given as a specimen of healthy structure. It would not have been difficult to find a healthy specimen of human bladder.

In the final chapter he refers to the treatment of tumours of the bladder by various means. He has no faith in medicines which are given internally, nor in solvent injections, and very little in styptics apparently ; but, wisely we think, he urges the more general use of the operation of urethrotomy for exploration ; and even where no tumour can be removed, on account of its malignant character, much relief may be given by the perineal opening. The steps of the operation are now given with reference to removal of growths ; and it is encouraging to find that Sir Henry Thompson's experience of partial removal and a repetition of the operation at a later date has been favourable. He warmly advocates its superiority over the suprapubic operation, which is more dangerous, less advantageous for drainage, and less capable of ensuring thorough exploration of the interior of the bladder or removal of growths which may be there.

Suprapubic pressure is an useful help to the operator, but the dangers of this are fully recognised. It should never be resorted to except for the purpose of exploring the walls—never during the removal of growths by forceps or ecraseur.

Then follow five cases fully detailed, and finally a table of twenty cases in which the operation has been performed by the author, and the results are encouraging. We can only hope that the author's wish may be realised, and the second twenty show even better results. But the fact remains that growths in the bladder and hitherto unrecognisable diseases of the organ are brought now within the range of diagnosis and of practical surgery.

W. W. Wagstaffe.

Article 3165.

Lectures on Mental Disease. By W. H. O. Sankey, M.D.Lond., F.R.C.P., &c. Second Edition, with Illustrations. London : 1884.

In the form of lectures, with cases now and then cited by way of illustration, Dr. Sankey, in an octavo volume of 450 pages, treats most of the varieties and symptoms of insanity which are met with in this country. The first part, given to what he calls 'Mental Science or Physiology,' is not the best part of the work. Medical men, who are accustomed to deal with observed facts, rarely seem at home in treating of speculative philosophy. Dr. Sankey helps himself through his difficult way by a series of quotations, which appear like stepping-stones across a brook, at a given distance from one another. The authors whom he delights to cite seem to be Lewes, Spencer, Comte, Maudsley, and others of the materialistic school. We are told that Comte 'was a French professor, and that his writings have had a large influence on French philosophy, and have brought it more into accordance with English views,' a statement not likely to be received in an acquiescent spirit either in France or England. After giving a summary definition of the positive philosophy, Dr. Sankey remarks : 'There are many matters, however, in the writings of Comte which are by no means accepted—views on religious and political questions, which partake rather of atheistic and materialistic views, and which, at all events, are quite foreign to our present purpose. More especially was there in the later writings of Comte much of the mystical and obscure, and which have given rise to an adverse opinion concerning him. It should be borne in mind that much of these peculiar doctrines form no essential part of Positivism, and these views were broached only in the latter part of his life, and after a severe attack of mental disease.'

It may be worth while here observing that Auguste Comte was insane for about eighteen months in 1826 and 1827, and was thought by Esquirol to be incurable. The six volumes of the *Cours de Philosophie Positive*, as well as his later works on Sociology, were all written after this illness. Materialism seems to be an essential part of his system ; and though in his classification of the sciences Comte showed a great grasp of intellect, his contributions to mental philosophy scarcely entitle him to the distinguished notice given him by our author. Be this as it may, a thoughtful man like Dr. Sankey, who has closely observed mental processes, both normal and deranged, has always something worth saying upon the subject ; and as the reader gets through this introductory part, he will come across a good many observations which are worth remembering.

The author reduces mental diseases to a few well-known forms, and looks with little respect upon classifications embracing a large number of types. For example, he does not seem disposed to admit puerperal insanity, still less the insanity of lactation. He treats phthisical insanity as simply insanity in a phthisical patient, and avows his opinion that dipsomania and *mania a potu* represent no distinctive kinds of mental disease, and that epileptic insanity is not a special form, either as regards the epilepsy or the insanity. Dr. Sankey gives a definition of most of the forms and names coined by different authors to cover or recall the varying symptoms of mental derangement, finishing with a list of 'other terms not much used or useful.'

Dr. Sankey's own classification is of the simplest, and it would not be difficult to make objections against it ; but no classification of insanity has yet been contrived which is beyond the attacks of criticism. Dr. Sankey's mind leading him rather to making generalisations than distinctions, he is not fond of

those technical divisions, at present much affected by writers and lecturers on medical subjects, and which they are too apt to regard as having a real existence. His great acquaintance with insanity appears in every page, and many of his remarks are both original and instructive. Take the following. 'I am not aware that any very accurate calculations have been published of the number of deaths that occur, and are attributed directly to the mental disease. But I find from such calculations, as I have been able to make myself, that about one-half of the deaths that happen in acute insanity, may be attributed to the disease itself, or, more accurately, in the proportion of 25 to 45. The total number of deaths in acute cases cannot be more than one-tenth of the occurring cases; and, since in round numbers, about 75 per cent. recover, and 10 die, it follows that 15 per cent. pass into a chronic stage, in which state some few more ultimately recover. These proportions are, however, but rough estimates.'

Dr. Sankey's humoral pathology of insanity is stated in a masterly way. 'If we admit that the act of cerebration depends upon the organism at all,' he argues, 'that we are driven to the conclusion that the integrity of the function must rest between the nerve-tissue on the one hand, and the blood (or nutrition) on the other. To account for the change of function we have these two factors. The phenomena we are seeking to explain is a rapidly changing one, its cause should therefore be a changeable agent; the change too is not only rapid, but it is often transient, the cause therefore must be in the function of changeable kind. In the circulation we have such kind of agent, nerve tissues are permanent; for a changing effect we must seek a changing cause.' Dr. Sankey finds the starting point in many cases of insanity in an abnormal condition of the blood, due to an error of assimilation which frequently causes disease of the kidneys. The arterioles are assumed to contract against the passage of the impure blood, causing torpid circulation in the brain, followed by melancholia; or 'the stop-cock action' of the vessels, 'may be overpowered by a *vis a tergo*, and excessive action, or excitability of the cerebral tissue, would result.'

There is no question that the state of the circulating fluids has a great influence upon the activity of function of the cerebral tissues; hence there is an antecedent probability in Dr. Sankey's views that impure blood often is a cause of insanity. It would, of course, be the next step to indicate or detect the nature of this impurity. It does not seem to us that Dr. Sankey is very successful in proving the frequency of heart and kidney disease in insanity, although he regards them as the result or accompaniment of a diseased condition of the blood. Nevertheless, we are not disposed to deny that cardiac disease is common with the insane, and certainly a weak or abnormal state of the heart is very often to be found in congenital idiocy. The evidence about the frequency of kidney disease is scanty. Dr. Sankey writes that on first entering upon his medical duties amongst the insane, he was much struck with the frequency with which kidney disease occurred in his autopsies, and 'Dr. Howden, of the Montrose Asylum, found disease of the kidney in 97 out of 235 autopsies, of which 55 were fatty and 31 had cysts. He does not mention adhesion of the capsule.' Dr. Bucknill, on the other hand, says that 'the kidneys were remarkably free from disease in Devonshire.' For several years, along with our friend, Dr. Frederick Skae, we examined all the patients who died in the Larbert Stirling District Asylum, where an examination could be had, and were struck by the rareness of kidney disease.

Dr. Sankey might have used the recent observations which have been made in Switzerland upon the results of the excision of the thyroid gland, as well as the degeneration of that organ observed in exophthalmic goître, cretinism, and myxœdema. These certainly go to support the view that an alteration in the quality of the blood may be a powerful cause of insanity.

In no part of this work is Dr. Sankey's skill and experience better shown than in the chapter on treatment. His advice how to act on difficult occasions will be appreciated by anyone who has ever had to deal with such emergencies. Even where he differs from views generally received, his opinion, founded upon a long and varied experience, must retain weight.

Dr. Sankey observes that it is an established fact that the insane do not bear any removal well. Concerning taking patients to the seaside he writes: 'It is to the latter case that the following remarks refer. A mere trip to a fresh place is simply like any other kind of amusement; but when a patient is taken to reside in a different locality there are several matters to be considered, and which I have learnt from experience. In the first place, a change of this kind is only suitable for chronic cases. An acute case or a patient in the early stage does not require rousing but rest; they can scarcely be kept too quiet. To insure tranquillity in chronic cases, care is needed. I have found the trip to the seaside by no means so universally beneficial as I had anticipated. For a time some chronic cases appear to be benefited, but the majority often relapse, and several among those for whom I have tried this remedy were permanently disturbed.'

The concluding chapter, upon the legal relations of insanity, is well written and full of sound practical advice. Dr. Sankey, who was formerly superintendent of the female department at Hanwell, and is now proprietor of the Boreatton Park Asylum, takes occasion to defend the physicians of private asylums against recent sweeping attacks.

'It may be asked,' he writes, 'by what law or right are the public to be deprived of the services of a physician of their own choice?

'Why, when a friend or relation becomes insane, is the fact to be made public by drafting him into a State asylum?

'Why is the disease to be treated only and studied only by medical men elected by lay governors and subscribers to such establishments?

'If a medical man has given his attention to the investigation of mental disease—in regard to its pathology and treatment—why may he not put into practice the views that he has arrived at, and without the interference of a lay committee, who often have crude notions of their own?'

It is no great proof of critical skill to make a collection of minute errors, but in the event of a third edition Dr. Sankey ought to be more careful about the spelling of German words and names. Errors of this kind are too numerous to be attributed to misprints, especially as French words are generally correctly spelt.

On the whole, however, this is a work which could only be produced by a man of great ability

and ripe experience. Any medical man who takes it up will read it with pleasure and profit.

William W. Ireland, M.D.

NEW INVENTIONS.

Article 3166.

DŒCKER'S PATENT PORTABLE HOSPITALS.

These patent portable hospitals, which probably many of our readers may have seen at the International Health Exhibition, are of Danish invention, and are likely to be interesting to local boards, corporate bodies, &c. They are made in several sizes, from a one-roomed cottage upwards, and, besides hospital use, may be devoted to a variety of purposes. They were invented and patented a few years since by Captain Dœcker, of Denmark, and have been very generally patronised on the Continent; and, so soon as Messrs. Puggaard & Galschiot (the English representatives) succeed in making their admirable qualities known in the United Kingdom, they are likely to be equally appreciated here. An examination will show them to be constructed of the simplest and lightest possible materials compatible with a due regard for strength. The walls and roofs are composed of a series of panels or frames, either connected by hinges for readily folding up, or when put together, secured by hooks and eyes; while the flooring is sent out in sections ready for laying on the joists, the projecting ends of the latter serving as bearings for the walls. No foundation or digging for pegs or uprights is required; it merely being required to choose a level spot, when the hospitals of small size can be erected without skilled labour in a few minutes, and the larger ones in a proportionately short space of time, also without skilled labour; and though, as already stated, they are in no way fixed to the ground, they stand perfectly firm, and will resist any gale. The outer sides of the frames mentioned as forming the walls, &c., are covered with canvas, and upon that is glued a layer of felt. This excellent non-conductor prevents the external air from affecting the interior, which is thereby kept cool in summer and warm in winter.

Sir Robert Rawlinson, in a recent lecture upon the 'Hygiene of War,' said: 'This invention seems particularly suitable for portable hospitals and tents during warfare and in a camp, as the weight of these structures is only about half that of wooden huts having similar areas. The duration of these Danish huts will also be much longer. These constructions may be most fully and perfectly ventilated, and the felt with which they are covered makes them comfortable abodes summer or winter. To my belief the Dœcker hospital huts are, so far as I know, the most perfect portable structures ever invented for the purposes intended.' The price is low, compared with anything else of the kind before the public, and it is said that the cost of these portable hospitals is hardly one-fifth of that of ordinary brick huts, a fact which, combined with their other important features, should lead to their extensive adoption in this country.

Article 3167.

HERPESINE.

'Herpesine' is described as a 'specific for ringworm, scald head, itch, bald patches on the head, and other skin diseases.' It is a fluid smelling strongly of acetic acid, and having a deposit which obviously consists of Goa powder. The late Sir Erasmus Wilson has fully endorsed the value of the acid in skin-diseases of a parasitic nature. The directions are that the bottle should be well shaken, and the contents applied night and morning to the parts affected, a feather or camel-hair brush being used for the purpose. We have no doubt that it possesses the properties claimed for it; and we are informed by the proprietors, Messrs. J. Lister & Co., 36 Jewin Street, E.C., that it has an extensive sale, particularly in the East.

Article 3168.

A KETTLE FOR THE SICK ROOM.

The City of London Sanitary Association, Cannon Street, E.C., have recently introduced a new tea kettle which, in addition to its other uses, will be found of great value in the sick room, where hot water is constantiy required. Several patents have from time to time been taken out for kettles of a shape to boil water quicker than in the ordinary one, but appear to have had but a limited existence. Mr. Barron, the inventor of the one in question, has endeavoured to avoid the weak points in prior

inventions, and he appears to have succeeded to an extent not likely to be surpassed; the kettle being described as without a bottom or lid, the only opening being the short spout, through which it is filled, and through which the water is poured out. It is formed with a large hollow chamber underneath, in which the fire or heat is concentrated. No kettle now in use will boil a small quantity of water so rapidly, and it matters not whether the heat applied be that of a gas stove or coal fire; the boiling point being reached in an incredibly short time.

The Tung Wen, or Foreign Language College at Pekin, is about to issue a large work on Anatomy by Dr. Dudgeon of that place. It is said to contain prefaces, in the usual Oriental manner, from several of the highest officials at the capital. The work has over 500 cuts made at the Government expense. A large work on Physiology is also ready for the press; while Dr. Dudgeon has ready for the English press a little work on the diet, dress, and dwellings of the Chinese in relation to health.

DIETETIC NOVELTIES.

ARTICLE 3169.

THE EDELWEISS MILK.

THE Edelweiss Condensed Pure Unsweetened Milk is undoubtedly an useful preparation. It is made at Gossau, in Switzerland, from cows' milk, by a simple process of evaporation and concentration, no antiseptic or other substance of any kind being added. One great advantage over other condensed unsweetened milks seems to be, that it is put up in bottles instead of tins. Some specimens which we have examined seem to be rather dark in colour and to have a somewhat unpleasant burnt taste. This probably arises from sufficient care not having been taken to regulate the temperature in the process of manufacture. It is not stated in what kind of vessel the milk is evaporated, but if copper pans be used, it would be desirable to test for metallic impurity. We notice that the neck of the bottle is furnished with a vulcanite or India-rubber rim. We do not say that this is of necessity a source of danger, but we do think that it is incumbent on the proprietor, Mr. A. Moos, 84 Basinghall Street, E.C., to show that this preparation is absolutely free from contamination of any kind. The milk is palatable, and goes well both with tea and coffee. It keeps for about a week after being opened, even in hot weather, and, in the matter of price, is said to compare favourably with most of the tinned unsweetened milks.

MISCELLANY.

A NEW work on the clinical history and pathology of diseases of the ovary and adjacent parts by Mr. Alban Doran, Assistant Surgeon to the Samaritan Hospital, is announced as having been recently published.

THE eminent pathologist, Dr. Cohnheim, Professor of Surgery in the University of Leipsic, has recently died at the age of forty-five. He was distinguished for his researches on the passage of the white blood-corpuscles through the walls of the vessels in inflammation.

THE last numbers of the 'Encyklopædie der Naturwissenschaften' (Breslau, Eduard Trewendt) are Part 1, No. 37, and Part 2, Nos. 21 and 22. The first forms the continuation of the 'Handwörterbuch der Zoologie, Anthropologie, und Ethnologie,' and numbers among its writers Shellwald, Reichenow, Pfeffer, Martens, Jäger, Röckl, and others. Among the articles in the present instalment are the pacing of horses, by Professor Röckl; the brain, by Mojisisowics; and on the geographical distribution of animals, by Dr. Reichenow.

JURORS NO JUDGES.—Illustrative of the value of jury trials, involving questions of which the jury are profoundly ignorant, Dr. Gundry (Reports of the Maryland State Board of Health) gives the following. Sixteen years ago, in a rich and intelligent county, a case was on trial in which a huge distillery, with its attendant hog-pens, was complained of by the neighbours as a nuisance. It was shown that both the adjacent air and streams were so contaminated as to make the people in a near village uncomfortable, and in some cases a fever had been traced to it. Expert testimony showed the probable results of such a state of things. But the defence placed in the witness box a respectable looking farmer, who was well-to-do. He testified that the nuisance complained of was not to be feared. He thought it really an advantage. He said in proof of this that he owned a very bad smelling privy himself. The odour from this was terrible, but it sufficed to cure attacks of headache to which he was subject. The cure was accomplished by placing his face over the seat, and holding it there. The man was honest, and in ordinary things intelligent. His so-called practical knowledge outweighed the positive testimony of the other side and the theories of the experts. The jury found for the defendants. A couple of years later the neighbourhood was scourged by an epidemic of fever.

BENEFITS TO MAN FROM EXPERIMENTS ON ANIMALS.—Until the results of the researches by Dr. Ferrier on the localisation of the functions of the brain were made known to physicians and surgeons, diseased conditions intrenched within the bony cavity of the cranium had been considered beyond the resources of our art. Numerous benefits to practice have followed. Recently, Dr. Macewen, of Glasgow, reports the following case. Hemiplegia developed slowly in a female who had specific history. Vigorous treatment and counter-irritation were tried without benefit. By the advances made in recent years in cerebral localisation, Dr. Macewen was enabled to become reasonably certain of the locality of the brain disease. He trephined over the middle of the ascending frontal and parietal convolutions. The internal table was thickened and rough. A yellow, false membrane covered the dura mater; this was removed. The dura mater was somewhat thickened. An incision was made into the brain, and about two drachms of fluid escaped. The wound was closed, and it healed without the formation of matter. The next day the patient felt very much better. In three days she could move her toes; within a week she could move her fingers and the entire lower limb. In a short time, she was able to walk and do domestic duty in the hospital. Similar improvement took place in her memory and intellect. There is no doubt that the improvement was directly due to the operation. The results in this case point to the possibility that opening the cranial cavity has a much wider field than that occasioned by injuries.

THE PROVINCIAL MEDICAL SCHOOLS IN ENGLAND.—Within the last few years the provincial medical schools in England, which were originally started for the most part as independent institutions, have been made departments of, or have joined themselves for purposes of instruction with, the Colleges of Science established in the same towns. Among the most recent examples have been the co-operation of the Queen's College, Birmingham, with the Science College established in the town by the munificence of the late Sir Josiah Mason; the combination of the Sheffield Medical School with the Firth College; and the union of the Leeds School of Medicine to the Yorkshire College as its Medical Department. When this College becomes affiliated to the Victoria University, the students of the Leeds School of Medicine will be able to take the degrees of that University. Several important changes have been made in the arrangements of the school. An endowed Professor of Physiology has been appointed in the person of Dr. de Burgh Birch, late Senior Assistant to Professor Rutherford, of Glasgow, who will be assisted by Dr. Barrs, one of the former teachers; and the laboratory is being furnished in such a way as to give the greatest completeness to the teaching. The courses on Pathology and Morbid Histology are enlarged. A new Demonstrator of Anatomy, Mr. W. O. Travis, is appointed, who will give his whole time to teaching; daily attendance in the dissecting room being given also, as heretofore, by the Demonstrators. A separate course is to be given on Diseases of Women and Children, and a special course on Hygiene. Practical testing for Poisons will be taught by the Chemical Demonstrator at the College, separately from the ordinary Practical Chemistry. Dr. Clifford Allbutt and Mr. Pridgin Teale, who by the operation of the twenty years' rule have retired from active service at the Infirmary, but remain as consulting physician and surgeon, with the privilege of a limited number of beds (as does also Mr. Wheelhouse), will give short courses of clinical lectures during the session, which will probably be open to practitioners as well as students.

The London
Medical Record.

Article 3170.

MOROKHOVEZ ON THE PHYSIOLOGICAL ACTION OF KAIRIN.

In the *Meditz. Obozr.*, Fasc. 9, 1884, p. 928, Dr. L. Morokhovez, of Moscow, describes the results of his experiments on the action of hydrochlorate of kairin in dogs. He introduced kairin, dissolved in 0·6 per cent. solution of chloride of sodium, either into the saphenous vein or into the duodenum (through an incision along the linea alba).

On the introduction of doses of 0·5, 0·6, and 1·0 gramme, the arterial blood becomes dark-brown with red tint; it coagulates almost momentarily after its withdrawal from the vessel. The red blood-corpuscles assume a cup-like form and a red brownish colour. Spectroscopic examination clearly shows the presence of methæmoglobin. The animal presents a cyanotic discoloration, with a peculiar lead tint. The secretion of saliva increases, but the function of the pancreas remains unchanged. The secretion of bile is augmented; the bile becomes viscid, dark, almost black. Kairin seems to produce no influence on the kidneys. When the bile is allowed to flow into the bowels, the urine presents a dark-green colour, and gives all the reactions for biliary pigments. When the bile is eliminated through a cannula tied into the ductus choledochus, the urine contains only kairin, which may be easily discovered by means of fuming nitric acid. On the addition of the latter to the urine, there appears a bright brown-red ring.

In ten seconds after intravenous administration, and in three minutes after the introduction of kairin into the duodenum, there are developed an intense dyspnœa, accompanied by a temporary fall of the blood-pressure, and a weakness of pulse characterised by short and low waves. The author thinks that the lowering of the arterial tension and the weakness of pulse are dependent upon an atonic condition of the cardiac muscle with a dilatation of its cavities. This view is well supported by the direct observations of Dr. Schnaubert, who noticed that the ingestion of kairin was followed in his patients by a considerable increase of the cardiac dulness. It is supported also by the results of the *post mortem* examination of the animals experimented upon.

When fatal doses are administered, the heart stops before the respiratory movements have ceased; the necropsy, performed immediately after the animal's death, reveals enormous distension with blood of all the cardiac cavities.

Some experiments on frogs led the author to the belief that kairin, like curare, affects the intramuscular endings of the motor nerves. The respiration usually assumes the Cheyne-Stokes' character. The temperature of healthy dogs is not lowered more than 0°·5 C.

Dr. Morokhovez thinks that kairin, as a ready oxydisable body, on its entering the blood, robs hæmoglobin of its oxygen and transforms the former into methæmoglobin; hence the oxydation in the tissues is lowered; hence, also, the author's advice not to give kairin to any patients with lung-diseases, anæmia, and cardiac affections.

In conclusion, he mentions (*a*) a case communicated by Dr. Neviadomsky, of Ivanovo-Voznesensk, who saw dangerous collapse and cyanosis in a woman with croupous pneumonia, after she had taken four eight-grain doses of kairin; (*b*) Dr. Shaternikoff's case of a puerperal woman with acute anæmia, who, after three five-grain doses of kairin, suffered from an extreme præcardiac anxiety and indescribable oppression; and (*c*) a fatal case from the practice of an anonymous physician, in which the patient's death was ascribed directly to kairin [whether rightly so, or not, is not to be seen, since not a single detail is adduced.—*Rep.*].

V. Idelson, M.D.

Article 3171.

ANTIPYRIN, A NEW ANTIPYRETIC.

Antipyrin (*Centralbl. für die Med. Wissensch.*, 1884, No. 29) is a quinoline derivative discovered by Knorr, of Erlangen, and first investigated by Filehne. It is a white crystalline powder, readily soluble in water, and of weak easily disguised taste. According to Filehne, it promptly lowers the temperature, in doses of 5 or 6 grammes (= 77 or 92 grains), best given in three portions, with an hour's interval between. The temperature falls gradually, usually without sweating, and reaches its limit in three or four hours. It remains low for seven or eight hours as a rule, but twenty hours may elapse before the original temperature is reached again. The rise is not accompanied by shivering. The pulse is retarded, but not proportionately to the temperature. No unpleasant symptoms occur except vomiting in some cases after large doses. The urine was always free from albumen, and was not darkened. Half the above dose (7¼ grains) is enough for children, in sugar and peppermint.

Guttmann confirms the above (*Berlin. Klin. Wochensch.*, 1884, No. 20). The fall was at least 2°·7 F., sometimes as much as 5° F. He used the drug in twenty-seven cases, all with high temperatures. After remaining low for a few hours, the temperature gradually rose to its former level (without rigors) in five or six hours, but sometimes not till sixteen hours or so. In this respect it differs from kairin, and more resembles quinine. When the temperature was much lowered, sweating was often observed. There were no unpleasant symptoms, except vomiting in a few cases.

H. Falkenheim (*Berlin. Klin. Wochensch.*, 1884, No. 20) fully confirms the above, except that he found the drug of no use in intermittent fever, although in one case he gave as much as 25 grammes (0·88 ozs.) in twenty-four hours.

C. Ranke also reports favourably, but adopted subcutaneous injection, on account of vomiting in sensitive women an hour or two after taking the drug. No local effects were produced except painfulness for a short time, but in one case a general transitory urticaria followed. Thus used, the effect was quicker with smaller doses. Usually a single injection of two grammes sufficed (half a drachm); and Ranke recommends this method generally, except where too rapid a fall of temperature might be attended with danger, as in childhood and asthenia. One part of antipyrin dissolves perfectly in half a part of hot water, the solution remaining clear and unaltered for

several days. Three parts of cold water are required to dissolve one part of antipyrin.

Alexander (*Breslauer Aertztl. Zeitschr.*, 1884, No. 11) observed the favourable effect of antipyrin in fifteen cases, but it appeared to have no specific action in acute rheumatism. No unpleasant symptoms are recorded by him, except vomiting in a few cases, more frequently in women than in men.

E. J. Edwardes, M.D.

Article 3172.

HOPPE-SEYLER ON PHYSIOLOGICAL CHEMISTRY, AND ITS IMPORTANCE IN MEDICINE.*

This speech was delivered by Professor Hoppe-Seyler at the recent opening of the new Institute for Physiological Chemistry, at the King William's University in Strassburg. The learned professor began with some general references to a few of the chief discoveries in chemistry during the last century, more particularly to those relating to oxygen, water, and carbonic acid. The results obtained, he said, bearing upon the respiration of animals, green plants, and germinating seeds, disclosed to the physiologist a deeper insight than he formerly possessed into the chemical relations of the organism to the surrounding atmosphere. Passing reference also was made to the work of Chevreul on fats; of Prout, Tiedemann, and Gmelin on digestion; of Prevost and Dumas upon the composition of the blood and the origin of urea; and to the important influence upon chemistry of Wöhler's discovery in 1828 of the synthetic formation of the last-named body. Berzelius and Liebig in turn received their meed of praise, as also Laurent and Kekulé for their hypotheses as to the elementary atomicity and the arrangement and grouping of atoms in the structure and constitution of chemical compounds. To Liebig particularly is physiological chemistry indebted in its early stages, not only for his own discoveries and the masterly processes he instituted for practical work, but also for the encouragement he gave to other labourers in the same field, and the investigative spirit with which he imbued them both by precept and by example. Much of our knowledge of the food-stuffs and of their qualitative and quantitative action upon the organism—knowledge which has been of great importance to agriculture, medicine, and hygiene—we also owe to him.

On other sides likewise has physiological chemistry made rapid strides, of which we have instances in the discovery of the diastatic ferment action of the saliva and pancreatic juice, and the removal of pepsin from the mucous membrane of the stomach by the action of dilute hydrochloric acid; and later, the knowledge of the action of the pancreatic juice upon fats, and of the wonderful formations and changes of the carbohydrates in the animal body, especially in the liver, dependent on the nature of the food and various other influences. By new methods and the use of better apparatus, more exact information has gradually been acquired of the digestive secretions, and of the gaseous interchanges of the tissues. It is sufficient merely to mention the names of Bernard, Schwann, Regnault and Reiset, Strecker, Scherer, and Städeler to recall many of the varied contributions that have been successively made to physiological chemistry. Schmidt by his work on the constitution of the blood, as also Magnus, J. Müller, Schönbein, and R. Bunsen by their respective discoveries in connection with gases and gas-analysis, have also contributed greatly to its advancement as a science. An important influence was likewise exercised upon its progress by the publication of Virchow's *Cellular Pathology* and Max Schultze's views as to the structure of animal cells; and the same may be said for the investigations of Pasteur and his scholars, followers and opponents, upon the low bacterial organisms. But in regard both to this mycology and to its chemistry, it must be confessed that there is still much obscurity and uncertainty; although it is undoubtedly true that by acting in accordance with the so-called antiseptic principles the province of operative surgery has been widely extended, and that in certain diseased conditions, such as relapsing and splenic fevers, special micro-organisms are certainly to be met with in the blood.

As the result of continued and laborious investigations, the composition of the blood and its alterations in a given time under the influence of definite physiological processes is so well known, and the chemical function of the red corpuscles, particularly the absorptive action exercised by their hæmoglobin on the oxygen of the air in the lungs, as also the transference of this gas to the active cells of the organism, likewise so well understood, that in a given case it has now become a simple calculation to estimate the total quantity of oxygen used up in a given unit of time. Of the numerous compounds previously recognised as occurring in the body, the exact chemical composition of many is now known, and some have further been formed synthetically; others have also been discovered of late, and among others again many marked relations have been established between their structure and functions and their chemical composition, of which we have good examples in the aromatic series. It is very interesting to find that the stuffs the organs construct, and out of which they build up and regenerate themselves, belong to the class of bodies known as anhydrides, which under the action of alkalies or acids, and many of them under the influence of ferments, may be so altered or split up by the assumption of the elements of water, as to form hydrates. These anhydrides for the most part manifest no marked chemical affinities, but swell up in water or dissolve with difficulty therein, withstand the action of the atmospheric oxygen, and possess, so far as yet known, very large molecules.

Between the chemical constituents in general found in animals and plants respectively, there does not appear to exist much specific difference, some of them, as albumen, fat, and inosit appearing in both; others, like cellulose, starch, grape-sugar, tannic and malic acids only in plants; others, again, like glycogen, being formed chiefly in animals; while certain bodies, such as gelatin, urea, and kreatin are only built up in animal tissues. The limitation, however, which was formerly believed to be sharply defined between plants and animals, has of late become more and more indefinite. The finding of inosit, glycogen, and allantoin in plants, the close relationship established between the caffein and theobromine of plants and the xanthin and guanin of animals, but especially the almost un-

* Uber die Entwickelung der Physiologischen Chemie und ihre Bedeutung für die Medicin.

exceptional presence of globulin substance, lecithin, cholesterin, nuclein, and potassium in all the hitherto examined normal or pathological developing cells, whether of animals or of plants, all point to the hypothesis that certain definite fundamental chemical formations and metamorphoses are common to every living being, as also certain vital phenomena, particularly growth by a building up of their own substance, and a continuous transmission of their own properties and proportions; that this community must be based on the presence of these common chemical constituents; that, different as the transformations may appear in the different classes, orders, and families of plants and animals, yet many of their essential processes run more or less in exact accordance with fundamental types; and that in the vital phenomena of the human body this same parallelism is to be found, whose simplest manifestations can probably be traced with least difficulty in the lowest organisms.

It must be remembered that, as a rule, when the chemical constituents of the cells or protoplasm are spoken of, reference is made, not to the living substance, but to its decomposition-products; for it may be assumed with much likelihood that what are found as hydrates and other decomposition-products really existed in the living protoplasm as anhydrides. As to the chemical structures and properties of living protoplasm, different theories have been proposed of late. Its mechanical and chemical properties, so far as they have yet been investigated, seem to lead one to the assumption that the same protoplasm when subjected to certain external influences, is capable of presenting itself under two distinct forms, differing in chemical structure, in its action on other organic stuffs coming in contact with it, and in its attraction for water. Two kinds of processes may manifest themselves in protoplasm, by one of which fermentative decompositions may be set up, and by the other anhydrides generated. Both processes stand in such marked opposition one to the other that they are not likely to go on at the same time in one and the same substance, except in the lowest unicellular organisms.

When yeast-cells are placed in saccharine fluids, in complete absence of free oxygen, but with a sufficiency of food-material and a favourable temperature, they can continue for months to generate alcohol and carbonic acid, without growing or increasing of themselves to any extent; but when, on the other hand, oxygen is freely admitted, while little or no alcohol and comparatively little carbonic acid are generated, yet the yeast itself grows and multiplies abundantly. In like manner bacteria of decomposition, in the absence of oxygen, effect the decomposition of beef-infusion, some of the albumin, kreatin, sugar, and lactic acid contained therein giving place to leucin, hydroparacumaric acid, indol, skatol, ammonia, carbonic acid, hydrogen, and sulphuretted hydrogen. The bacteria then become motionless, and undergo little or no further increase. But the same bacteria, acting on the same infusion at the same temperature, but in presence of oxygen, cause no building up of hydrogen, or of organic decomposition-products, only carbonic acid, water, and ammonia being formed, but the bacteria themselves have increased abundantly, and show active movements. The building up of anhydrides, which is to be recognised in the growth and development of the organism, therefore occurs especially only in the presence of oxygen, or at least to a greater extent in its presence than in its absence. Yet the oxygen cannot of itself construct anhydrides, or be the direct and only cause of the bacterial movements.

A distinction, Prof. Hoppe-Seyler states, is to be drawn between the unirritable protoplasm, as it continues in the absence of oxygen, but exerting a fermentative decomposition power on albumins and many other substances, and the irritable protoplasm, of less density than the former, but having a greater attraction for water, and not acting as a ferment. In the presence of water, the second variety will pass over into the first with the assumption of the elements of water, in consequence of weaker or stronger stimuli, whether electrical, thermic, chemical, or mechanical; and in the presence of oxygen the first variety will pass over into the second, the oxygen being rendered active by the decomposition activity of the former, and by the instrumentality of this active oxygen the second anhydride protoplasm originates. If stuffs be present which can easily be rendered anhydrous, they are converted into anhydrides. The building up of anhydrides accordingly results upon the protoplasm returning to its anhydride condition, in consequence of the agency of active oxygen on the ferment-working protoplasm.

The muscles of vertebrates when stimulated alter in volume, decompose glycogen, and build up lactic acid, which is further oxidised in presence of oxygen; carbonic acid and water are likewise formed in the proportions in which they would be generated by a carbohydrate, and proportionally to the strength and duration of the stimulation. This passage into the stimulated condition occurs likewise in the absence of oxygen; for we know that the removal of oxygen, as in poisoning by hydrocyanic acid, rapid loss of blood, hanging, &c., quickly leads to the appearance of tetanic spasms. The watery fluid poured out when a gland is stimulated can have resulted only from a chemical and not a physical cause, as it is independent of the blood-pressure, and the salts contained in it are not present in the proportion in which they occur in transudations. Together with this separation of fluid, an abundant formation of carbonic acid and a generation of heat simultaneously occur. That the vacuolation to be seen in many protoplasms, as well as in the simple amœba, depends on a similar separation of a watery solution, in consequence of stimulation, is highly probable. Numerous and varied observations on the higher, and especially the warm-blooded animals, have led to the knowledge that, when there is a hindrance to the free entrance of oxygen into the organs, their excitability to stimulants sinks, whilst at the same time the sum total of the decompositions and tissue-changes rises. In the living kidneys, the passage of arterial blood effects the union of glycocol with benzoic acid—an anhydride formation. But the contrary process, consisting in the splitting up of hippuric acid and of similar combinations by the removal of the elements of water, is also of frequent occurrence in the living organism, probably, as may be foreseen, without the presence of oxygen, and by the agency of the non-irritable protoplasm. Indeed, the total living being would appear to owe its difference in form, structure, and function to its primitive chemical organisation.

After a brief statement as to the recent establishment of several special schools and laboratories for the pursuit of physiological chemistry, Dr. Hoppe-Seyler referred to a lecture delivered some time ago

by Dr. W. Leube (*see* the London Medical Record, February 1884) upon the importance of chemistry in medicine, with whose conclusion that the future of scientific medicine will be closely associated with physiological chemistry he entirely agreed.

It will be said by some that, while these advances in physiological chemistry may be of great importance so far as scientific medicine is concerned, yet their applicability is slight as regards its practice. Now, although this may be stated with some truth in the case of numerous results of anatomical and physico-physiological investigation, it is quite different with very many of the recent contributions of physiological chemistry. How, for example, would the physician safely follow and successfully treat many of the diseases of the stomach and intestines, and of the liver, kidneys, and urinary tract, as well as recognise the action of different poisons, or regulate and direct the diet in these and also in constitutional affections without a practical acquaintance with the methods of physiological chemistry and its varied teachings in the questions at issue?

T. Cranstoun Charles, M.D.

Article 3173.

AMIDON ON HEROIC INTERFERENCE IN SURGICAL AFFECTIONS OF THE BRAIN.

Dr. R. W. Amidon read a paper at the New York Academy of Medicine, June 5, 1884, with this title (reported in the *Philadelphia Med. Times*), in which he supported his plea by a review of statistics given by Walsham and others, and a collection of cases which he had made in which trephining or similar operations had been performed since 1879. Walsham gave over six hundred cases in which the trephine had been used, and of this number over four hundred patients died. Walsham's analysis of the cases, however, showed that only ten and six-tenths per cent. of the deaths could be assigned to the operation itself, and Dr. Amidon thought that this was even too great an estimate of this cause of mortality in the list. The cases which he had collected, occurring since 1879, amounted to one hundred, and were not selected. He thought that from these data one could arrive at pretty conclusive evidence as to the mortality of the operation *per se*, as looked at in the light of modern surgery. Of the hundred cases, twenty-six died, and, of the twenty-six, twenty-three presented at the time of the operation symptoms endangering life, thus leaving only three cases in which the fatal issue could even be remotely traced to the operation. He related three cases which went to show how extensive injury of the cranial bones might take place, and the patient still recover.

It would seem, from statistics quoted, that opening of the dura mater had led to a fatal issue in more than 39 per cent. of the cases; but, if it were remembered that in these cases there was usually laceration of the brain, hæmorrhage, or the introduction of a foreign body for exploratory purposes, it would readily be seen that the cause of death could not be traced to opening the dura mater during the operation in all of these cases. On the contrary, it had been shown that this procedure had not been the direct cause of death in more than seven and six-tenths per cent.

The author then considered how much foundation there was for the sacredness in which the cerebrum was usually held, and related several modern cases in which extensive injury of the brain had taken place and yet recovery followed. He briefly referred to the case of Dr. Fluhrer, not yet published, in which a young man shot himself in the forehead, the ball passing back to near the lambdoidal suture. The wound was probed; a counter-opening was made on the posterior portion of the skull, at the supposed exit of the ball through the brain; the ball was then removed, a drainage-tube introduced, passing from the anterior to the posterior opening of the skull, and the patient recovered, with retention of all his mental powers. 'We must admit,' said the writer, 'that the brain shows a remarkable tolerance of injury and remarkable reparative power.'

Dr. Amidon then gave a brief review of the subject of cranial and cerebral topography, by which alone cerebral surgery could accomplish brilliant results. He said that neurologists were perfectly sure that there were certain regions of the brain which, when irritated, compressed, or destroyed, gave rise to perfectly unmistakable symptoms.

He recapitulated by saying that we have in trephining an operation which proves fatal in only three per cent. of published cases; the operation of opening the dura mater being fatal in only seven and six-tenths per cent. We have in the brain an organ tolerant of injury, ready to take on reparative process; and we possess knowledge enabling us to tell when certain points of the brain are diseased, and also anatomical data enabling us to pierce the cranium and reach such diseased parts.

As to the operation itself, the substitution of the dental engine, with burr or drill, for the ordinary trephine, struck him as advantageous. The dental engine enabled one to remove only as much of the cranial bones as was desired, and of any form desired, and it was specially useful in removing the edge of overriding bone and allowing the elevation of depressed fragments. The operation should always be done with precautions. We should try to secure only proximate coaptation of the flaps. Provide for the freest possible drainage. Use cold antiseptic dressings without much compression. He said without much compression, because in one of the cases reported compression produced serious symptoms, which, however, were only temporary. We should enjoin quiet in a posture to facilitate drainage. There should be simple diet and a slightly loose condition of the bowels. Should there be a rise of arterial tension and temperature, give jaborandi or aconite to the production of their physiological effect. Quinine and alcohol, if used, should be given only in tonic doses. An anodyne was often indicated, and it was his advice never to use opium or any of its preparations. To ease pain and quiet delirium, or to induce sleep, use hydrate of chloral in small and frequently repeated doses—ten to fifteen grains every fifteen to twenty minutes until its effect is produced. Quinine and alcohol in large doses and opium in any doses aggravate intracranial inflammation when present, and he thought they might excite it. These suggestions applied equally well or with still greater force in cases in which the dura mater or brain was accidentally or intentionally invaded.

He would advise the operation of trephining in every case of injury of the external vault, provided there were marked cerebral symptoms; in every

case of compound fracture of the skull, whether there were visible depression or not, or cerebral symptoms or not; in cases in which, after the lapse of months or even years, unmistakable cerebral symptoms follow injury of the head. In addition to the bone, the dura mater should be opened in all cases in which exploration with the hypodermic needle discloses products of purulent inflammation or a great deal of liquid blood underneath the dura; in all cases in which serious superficial lesion of the brain is suspected, but cannot be otherwise proved. In addition to the bone and dura mater, the brain should be explored delicately with a probe in all penetrating wounds of its substance — punctured, lacerated, or gunshot. Its mass should be invaded even when superficially intact, by a fine blunt exploring needle when the presence of a foreign body or of a hidden collection of pus is suspected, and extraction or evacuation should be made with delicate instruments. Theoretically, he thought that, in a case of neoplasm of the brain which had resisted medical treatment and continued to grow, threatening life, it should be excised for the reason that such growths were usually single, were surrounded by an inflammatory zone of demarcation, and always killed by pressure.

Article 3174.

BENEDIKTOFF ON THE PHYSIOLOGICAL AND THERAPEUTIC VALUE OF STATIC ELECTRICITY IN NERVOUS DISEASES.

In an interesting paper in the *Vratch*, 1883, Nos. 8, 9, 10, 11, 12, and 15, Dr. M. V. Benediktoff describes his observations on the physiological action and therapeutic value of franklinisation in nervous diseases. He conducted his investigations under the guidance of Professor V. J. Drosdoff. Holtz's static machine was used. The methods of application were three: (1) sparks, (2) electrical wind, and (3) general franklinisation. In the majority of the cases the first of the three was applied. The duration of sittings varied from one to twenty minutes, usually from five to seven. The results obtained by Dr. Benediktoff may be summed thus.

Physiological Action.—1. Subjective sensations from franklinisation (sparks) are different, according to the degree of cutaneous sensibility and the strength of tension of electricity. Thus, weak franklinic currents cause a sensation of pricking; strong currents are felt as 'very burning shocks,' &c. In patients with impaired cutaneous sensibility, franklinisation produces formication or itching. 2. In some patients there appears inclination to sleep. 3. The skin at the spot of franklinisation (sparks) at first becomes white and pale, but in fifteen or twenty minutes begins to gradually redden, and in an hour or two after a sitting the whole franklinised area presents a picture of a roseolar rash, which condition lasts for several—sometimes twelve, sixteen, or twenty—hours. The phenomena are the more pronounced, the more delicate the skin and the stronger the franklinic current is. During the sitting, there is observed an augmented activity of the sudorific glands within the franklinised area. 4. The heart, after the sittings, works more regularly and more slowly, on an average six beats. Retardation of the pulse was observed in 91 per cent. of the subjects experimented upon; the pulse remained unchanged in 4 per cent., and grew more frequent in 5 per cent. 5. The electrical conductivity of the skin under the influence of static electricity (sparks) is almost always increased in the area franklinised, and sometimes also in other more or less remote regions of the body. 6. In the majority of cases (in 58·3 per cent. of the healthy, and 76 per cent. of the diseased) franklinisation increases the electro-sensibility of the skin, both in the franklinised area and in non-franklinised regions. 7. Tactile sensibility is also usually increased. 8. In the majority of the healthy (59·7 per cent.) muscular irritability is heightened, both in the franklinised area and in remote regions. In the diseased it is usually (in 55·5 per cent.) decreased at the spot of franklinisation, and (in 61·1 per cent.) increased in remote regions. 9. Muscular strength is usually weakened both in the healthy and in the diseased.

Therapeutic Action in Nervous Diseases.—1. *Neuralgia.*—The author used franklinisation in sixty-seven cases of this kind, sixty-one of which were of rheumatic origin, four of traumatic, and two of reflex (twenty-eight cases of sciatica, nineteen of neuralgia of trigeminus, eleven of intercostal neuralgia, &c.). In the rheumatic cases, the results were very striking. Even extremely obstinate cases were very often cured after one or two sittings of five to ten minutes' duration; in others, a great relief both in the number and in the intensity of the paroxysms was obtained. In some of the patients the disease returned after a while, but was less pronounced, and speedily yielded to renewed franklinisation. The results were less successful in traumatic and reflex cases, where pain disappeared only for fifteen or twenty minutes after a sitting, to return soon in its former degree. 2. *Rheumatism*, twenty-four cases.—In chronic and subacute forms of muscular as well as articular rheumatism, static electricity acted as effectively and rapidly as in neuralgia; hence, it is preferable here to galvanisation and faradisation. Franklinisation was useful also in acute forms; but the author is as yet unprepared to say whether it stands here superior to galvanic and faradic treatment or not. 3. *Peripheric Palsies*, ten cases (eight of rheumatic origin, and two of traumatic).—In rheumatic cases, a great improvement—amounting almost to a complete recovery—followed after two or three sittings. Sometimes, however, relapses occurred. In traumatic paralysis, faradisation gave better results than franklinisation. 4. *Chorea minor*, one case.—Temporary slight improvement was obtained. 5. *Cephalalgia*, two cases.—There was some improvement. 6. *Neurasthenia*, one case.—There was some improvement. 7. *Spinal Irritation*, two cases.—Both 'almost' recovered. 8. *Paralysis Agitans.*—Slight diminution of shaking was produced. 9. *Impotentia Virilis*, two cases.—No improvement followed in one; there was return of the sexual power after four sittings in the other. 10. *Nervous Itch*, one case.—Cured after two sittings of three or four minutes' duration. There was no return.

The author formulates his general conclusion thus: franklinisation may prove of great use mainly in peripherical nervous affections; in the majority of, if not in all, rheumatic cases it has a greater success than the application of faradic and galvanic currents. V. Idelson, M.D.

Article 3175.

BRUNS ON RESECTION OF THE KNEE.

In a recent contribution (*Mittheilungen aus der Chirurgischen Klinik zu Tübingen*, 1884) on resection of the knee in cases of fungous disease, Professor Bruns states that of late he has attained much better results from this operation in consequence of certain improvements in its performance, in the dressing of the wound, and in the after-treatment. In nineteen out of twenty cases in which, during twelve months, the knee was excised for tubercular disease, the wounds healed by primary intention under the first dressing. Formerly, it is pointed out, the chief object in resection of this joint was to remove the whole of the diseased bone. Since, however, fungous articular disease has been regarded as an articular tuberculosis, and this view has been confirmed by the discovery of the tubercle-bacillus in the granulations of the synovial membrane and of the articular extremities of the bones, more and more attention has been directed in the operation to a careful extirpation of the granular synovial membrane. In each of the above-mentioned cases as much care was taken in removing all the diseased tissues, both within and without the joint, as would have been done in the extirpation of a malignant growth. Not only the fungous articular synovial membrane, but also the synovial pouch communicating with the joint, especially the subcrural mucous sac, was completely removed by the use of the knife and scissors. Moreover, the peri-articular tissue, as fasciæ, ligaments, and muscles, whenever diseased, were, together with the capsule, carefully removed. Peri-articular abscesses were also extirpated, and abscesses reaching upwards on to the thigh were slit up along their extent, and the abscess-membrane of each was not merely scraped away with a sharp spoon, but was extirpated *in toto*. Professor Bruns takes away the patella and also the ligamentum patellæ, the posterior surface of which is closely connected with the capsule and a pouch of the articular synovial membrane. The dissection should be carried on until healthy structures are exposed, and until finally, in front of the articular ends of the long bones, all the soft parts between the skin and the bones are removed. Notwithstanding the great extent of the wound, primary healing always takes place, as only healthy tissues are left, and all parts that might include the existing agents of inflammation are carefully removed. The great danger of relapse after excision of a tubercular joint is known to most surgeons, and has been proved by König's tables of 117 cases. In most instances, the relapse is due to the retention of tubercular deposits in the soft parts. In the knee-joint, the anatomical conditions are such as to favour a radical extirpation.

Prof. Bruns holds that it is necessary to remove the patella in almost every case of fungous disease. The retention of this bone complicates the healing of the wound, renders difficult complete removal of the synovial membrane, and increases the risks of relapse. An exception to this rule is made in some cases of resection of the knee in children. In consequence of the very probable dangers of arrest in the subsequent growth of the limb after resection on young subjects, it is necessary to remove as little of the bone as possible, and to endeavour to perform only a partial operation. If most or every part of the articular cartilages be left intact, the patella must be retained, as the patient will very probably recover with a movable joint.

Prof. Bruns states that in some cases the most suitable mode of incision is that known as the inferior curved excision, which is carried across the front of the joint and through the ligamentum patellæ, so as to form a superior flap. In the majority of cases, however, of fungous disease of the knee, the superior curved excision, recently advocated by Hahn, will, it is held, be found the most convenient. This incision forms an arch with the convexity directed upwards, and is made through the tendon of the quadriceps muscle. The flap thus formed, which contains the patella, is turned downwards, and the upper recess of the joint is at once freely exposed. When this recess is much diseased and extends far upwards in front of the thigh, the superior curved incision is by far the best. Much importance is attached to this recess, as being almost constantly involved in fungous disease, and as being the starting point of relapse after resection. Another advantage of the superior curved incision, Prof. Bruns points out, is that the wound in the soft parts is not in the same line with that in the bones, and that the cleft between the same surfaces of the femur and tibia is covered by the flap, and not so much exposed, as in the usual operation, to external influences. In ten of the twenty recent cases of resection of the knee, Prof. Bruns made the superior curved incision, in nine cases the inferior curved incision, and in the remaining three the patella was sawn across obliquely and then removed. In each case dressings of corrosive sublimate were applied, the ends of the bones were kept in contact by two nails, and the edges of the flap were brought together by sutures applied as carefully as in a plastic operation on the face. The limb having been enclosed in 'wood-wool,' was then put up in a Watson's splint and plaster-of-Paris bandage.

W. Johnson Smith.

Article 3176.

GOLGI ON THE MINUTE ANATOMY OF THE CENTRAL ORGANS OF THE NERVOUS SYSTEM.

Professor Golgi, of Pavia, in a series of papers in the *Rivista Sperimentale di Freniatria*, commencing in 1882 and not yet finished, has set forth his remarkable investigations into the fine anatomy of the nervous centres. Whether his results receive confirmation or not, there will be little question as to the earnestness of the observer, the lucidity of the exposition, and the excellence of the drawings that represent the microscopic sections.

Prof. Golgi alleges that by employing new methods he has been able to attain a hitherto unapproachable degree of delicacy and exactness in tracing out the minutest details of structure ; and he states that all his illustrative lithographs, beautiful and diagrammatic as they look, can be verified by reference to the microscopic sections still in his possession. The methods in question are promised in an appendix to the present series of papers.

It would hardly be possible, without the aid of diagrams, to give an explicit and readily intelligible account of these researches. Only a few of the more fundamental points, therefore, will be indicated.

The structure, morphology, and mutual connec-

tions of the ganglion-cells are first examined. Two varieties of cell are described: (1) cells whose nervous prolongation gives off a few lateral filaments and then goes on to be transformed into an axis-cylinder; (2) cells whose nervous prolongation, subdividing in a complicated manner, loses its individuality, and in its entirety takes part in the formation of a nervous interlacement extended throughout the grey substance of all the strata of the cortex. Both varieties of cell are found in every portion of grey matter; but the first variety predominates in motor regions; the second in sensory. Every cell is provided with protoplastic prolongations, varying in number from three or four to fifteen or twenty; and with a nervous prolongation, always single. The protoplastic prolongations are regarded as channels of nourishment, and are found to terminate either in the walls of blood-vessels or in connective-tissue corpuscles adjacent to the vessels. The nervous prolongations as just mentioned either go directly to form the axis-cylinder of nerves, giving off in their course branches that join in forming a complicated interlacement, or, subdividing minutely, they are lost in the nervous interlacement. Corresponding to this arrangement the nerve-fibres have either a direct or an indirect origin. The fibres that form the interlacement are never seen to join each other so as to form a true network, but several fibrils unite to form the axis-cylinder of a nerve-fibre. The interlacement is composed, on the one hand by the subdivision of axis-cylinders of nerve-fibres of indirect origin, and by the fibrils given off from the axis-cylinder continuing directly into the nervous prolongation of the ganglion-cells; on the other hand, by the subdivisions of the nervous prolongations of the cells of the second class. As a result of this arrangement, each cell of the second class is connected with several nerve-fibres, and each nerve-fibre of the second class is connected with several cells. These cells, being found mostly in sensory regions, are regarded as psycho-sensory, and they afford an anatomical explanation of the diffusibility of sensory currents.

There is not, as a rule, any direct connection between two cells. The few exceptional instances where such a connection is found are regarded as cases of incomplete development; that is, development was arrested whilst the cell was in course of division.

In describing the strata of the cortex, Professor Golgi diverges farthest from other writers of authority. In fact, he charges Meynert, Gerlach, and others, with describing suppositions and conjectures as matters of fact. He says that it is not possible to make out a true stratification. For convenience, however, he divides the cortex into three layers—the superior, middle, and inferior thirds. This division excludes the submeningeal layer of connective-tissue cells. Three types of cells are recognised—pyramidal, fusiform, and globose or polygonal. In the ascending frontal convolution, for example, the first layer (that is, the layer below the connective-tissue cells) is composed almost exclusively of rather small pyramidal cells, which increase in size as they get deeper. The globose or polygonal cells are scantily represented in this layer. The second layer contains medium and large as well as extremely small pyramidal cells. The third and deepest layer presents the greatest variety of forms. The fusiform is however, the prevailing variety; and globose, polygonal, and atypical cells are found here in greater number than in the other layers. In the posterior extremity of the superior occipital convolution, the superficial and middle layers differ but little from the same layers in the ascending frontal convolution. The third or deep layer exhibits fundamental differences, consisting mainly in the great number of small nerve-cells situated in its deepest portion.

The cerebellar cortex is also divided into three layers, corresponding in this instance with marked anatomical peculiarities. The superficial or molecular stratum contains a series of large nerve-cells or cells of Purkinje, a great quantity of small nerve-cells, connective fibres and cells in large quantity, and, lastly, nerve-fibres. The middle or granular layer consists of so-called granules (very small nerve-cells), large nerve-cells, and connective-tissue cells, in addition to nerve-fibres. The internal or medullary layer consists only of connective elements and nerve-fibres. Nerve-fibres have the same modes of origin here as elsewhere; that is, they arise either directly from the nervous prolongation, or indirectly through the intermediation of the nervous interlacement by the union of several fibrils; and are held to subserve respectively motor activity and sensory activity, or automatic actions.

Various other portions of the brain are also examined with great minuteness of detail. The work, however, is one that should be translated rather than given in abstract.

William R. Huggard, M.D.

Article 3177.

BALZER ON GUMMATA OF THE SKIN.

In the *Revue de Médecine* for August, M. Balzer states that the specific inflammations resulting from analogous causes have many points of resemblance. Both gummata and tubercle, primarily types of nodular inflammation, in their evolution tend to caseous degeneration and to sclerosis. In the presence of the tubercular or syphilitic irritant, and, one may add, of the leprous irritant also, the tissues present an inflammatory action which histologically displays very similar characters. If there be any important differences, they are not to be sought in the lesions of the tissue-elements, but in the study of their evolution. It is necessary to establish a parallel between the clinical and macroscopic characters of the lesions on the one hand, and their histological features on the other, and that at all periods in the evolution of the inflammatory focus.

M. Balzer then describes the case of a syphilitic patient having syphilitic ulcers leaving cicatrices wide, irregular, blanched centrally, and pigmented at the periphery. These were found on the anus, tibial regions, face, scapula, &c. But particular attention is directed to the lesion on the right leg. This consisted of a large and long cicatrix, having all the characters of syphilis, adherent to the bone, and periostitic nodes along the whole length of the tibia. Upon it were found numerous elastic swellings, some hard, some softened at the centre and fluctuating, while others, already ulcerated, gave exit to a thin serous pus mixed with blood. Their size varied from that of a small nut to that of a pigeon egg. They were smooth, elliptical, or rounded, indolent, devoid of reactionary phenomena or noticeable discoloration of the skin. Incision brought forth nothing but a little serosity mixed

with a small quantity of blood, and the swelling did not disappear: a fact which was also true of those that were indurated and partly emptied, their shape being preserved by the indurated and elastic walls. On removing one for microscopic examination, it was found not to extend deeper than the dermis, and to consist of an infiltration, lardaceous in appearance, with thickening and induration of the dermis. To the naked eye there were no clearly marked gummata. M. Balzer applies to the lesion the name of *mycosiform gummatous syphilide*.

On microscopic examination the tumour displayed three distinct lesions: 1. extensive patches of caseation softened in the centre; 2. recent gummatous nodules surrounding the caseous foci; 3. at the periphery of these two lesions, a sclerotic zone formed of fine fibrils of connective tissue, in the midst of which were numerous round and stellate cells.

1. The foci of degeneration were in the deepest portion of the dermis, with an opaque centre consisting of granular cells, degenerated or in course of degeneration, whose nucleus no longer stained with carmine. There were granular masses no longer cellular in appearance, oil-globules, and many highly refractive bodies reacting under picrocarmine in a manner similar to colloid degeneration. The caseous foci were more or less encysted by a zone of embryonic tissue, in some parts advanced to sclerosis. A single giant-cell was seen between the caseous foci and the embryonic layer.

2. The lesions of the second class were evidently in the first instance circumvascular, situated in the dermis and subcutaneous tissue. In the embryonic zone mentioned above were seen many vessels more or less obliterated by the presence of a sheath of embryonic cells, which obliteration was aided by the proliferation of the cells lining their walls forming concentric layers inside the vessels.

3. Finally, in the healthy skin at a certain distance were found, here and there, more distinctly isolated vascular and circumvascular inflammations, analogous to those just described, and representing them in their earliest stage. The embryonic cells formed a nodular sheath around a blood-vessel.

As regards the elastic fibres of the skin, only a few isolated ones were found around the vessels, and no elastic bundles were to be seen throughout the gumma. A few fibres were seen here and there of normal appearance, but the majority of those visible were thinned and segmented or degenerated into mere granules, especially in the embryonic zone. They coloured but slightly with picric acid, and still less with resin or potash.

M. Balzer regards these circumvascular nodules as the first stage in the gummatous process, and refers to a remark of M. Malassez that they resemble so many little inflammatory foci induced by the injection of irritating particles. 'Do these particles really exist? Are they microbes?' These are questions which, in spite of the researches of Birch-Hirchfeld, M. Balzer considers still *sub judice*.

The primitive inflammatory nodules whose conglomeration constitutes a gumma develop around the vessels, which, M. Balzer insists, remain for a long time permeable, and only become obliterated as the proliferation of the inner coat proceeds. The degeneration begins at the periphery of the nodules, and follows a centripetal course; consequently the elements in the immediate neighbourhood of the vessels retain their vitality, while those farther removed are already degenerated. At this period specific treatment, directed to the resolution of the tumour before complete vascular obliteration has ensued, may yet be efficacious; otherwise the gumma suffers the fate of all lesions characterised by vascular obliteration, viz.: coagulation of the fibrine of the tissue-elements and exudation, granular degeneration and subsequent softening, being aided in situations largely supplied with elastic tissue by the lesser resistance to the degenerative process offered by this, as compared with white fibrous tissue, and also by the compensation in the latter case that results from the luxuriant sclerosis. If this degeneration, however, only comprise a small number of nodules, treatment may even yet succeed in inducing resorption of the degenerated products by means of neighbouring permeable vessels.

The process then only differs from that of chronic inflammation when the vascular nutrition ceases. The following phases, therefore, are to be distinguished in the development of gummata of the skin.

1. Inflammatory: formation of primitive gummatous nodules around the vessels.

2. Degenerative: vascular obliteration, necrosis with coagulation, granular disintegration, formation of a caseous focus.

Two lines of evolution are then open. Either the caseous nucleus encysts in a sclerotic zone that by contraction induces resorption; or the focus enlarges by embracing the surrounding embryonic nodules until inflammation attacks the epidermis. Then follow ulceration and progressive elimination of the softened contents. Kenneth Millican.

SURGERY.

RECENT PAPERS.

3178. Tait.—The Surgical Treatment of Gall-stone. (*Brit. Med. Jour.*, July, p. 67.)

3179. Treves.—The Element of Pain in Intestinal Obstruction. (*Brit. Med. Jour.*, July, p. 62.)

3180. Pearson.—A New Form of Knee-cap for the After-treatment of Lateral Dislocation of the Patella. (*Lancet*, July, p. 12.)

3181. Teale.—Abscess of the Lung Cured by Incision and Drainage. (*Lancet*, July, p. 6.)

3182. Smith.—The Fixation of Movable Kidney by Scratching its Capsule through the Loin. (*Lancet*, July, p. 10.)

3183. Marshall.—Washing out the Bladder. (*Lancet*, July, p. 48.)

3184. Sands.—Operation for Varicocele. (*New York Med. Jour.*, March 29.)

3185. Poland.—Dislocation of the Sternal End of the Clavicle backwards and upwards. (*Lancet*, July, p. 104.)

3186. Shearer.—A New Method of Treating Sprains. (*Lancet*, August, p. 233.)

3187. Brown.—A Case of Separation of the Anterior Superior Iliac Spine by Muscular Action. (*Brit. Med. Jour.*, August, p. 320.)

3188. Smith, E. Noble.—Excision of Portions of Tendons of Partially Paralysed Muscles. (*Brit. Med. Jour.*, June, p. 1253.)

3189. Lewellin.—The Use of Perchloride of Iron in the Treatment of Varicose Veins. (*Lancet*, August, p. 107.)

3190. Mac Cormac. — Thyroidectomy. (*Brit. Med. Jour.*, August, p. 222.)

3191. Modern Treatment of Hydrocele. (*Philadelphia Med. Times*, May 3, 1884.)

3192. Verneuil.—The Treatment of Hæmorrhoids. (*Gaz. des Hôp.*, May 8, 1884.)

3193. Egoroff.—On the Treatment of Incarcerated Hernia by Elastic Bandaging after Dumont's Method. (*Meditz. Obozr.*, 1884, Fasc. ix., pp. 925-6.)

3194. Vishnevsky, F. D.—On a Case of Foreign Bodies passing through the whole Digestive Tract. (*Meditz. Obozr.*, 1884, Fasc. ix., pp. 926-7.)

3195. Posadsky.—On the Treatment of Aneurism by the Application of Clay-Cakes. (*Vratch*, No. 26, 1884, p. 734.)

3196. Tripier.—The Treatment of Hypertrophy of the Prostate. (*Lyon Méd.*, No. 31, 1884.)

3197. Gross.—The Treatment of Stricture of the Œsophagus. (*American Jour. of the Med. Sciences*, July 1884.)

3198. Rogers.—A New Method of Procedure in Operating for Vesico-Vaginal Fistula. (*Mississippi Valley Med. Monthly*, Vol. iii., No. 1.)

3199. Garnet.—Obstruction of the Bladder. (*Cincinnati Lancet and Clinic.*)

Art. 3178. *Tait on the Surgical Treatment of Gall-stone.*—In the *Brit. Med. Jour.*, July 1884, p. 67, Mr. Lawson Tait writes that none of the suggestions for dealing with the impacted gall-stone (alluded to in the *Journal* of May 3, p. 853) seemed to offer any advantages over his own proposal to crush the gall-stone by grasping the duct with forceps. Mr. Tait therefore carried out his own proposal, and crushed the stone with great ease by two strokes of the forceps. It was about the size of a cherry, and, after it was broken, the fragments dispersed, giving no trouble at all.

3179. *Treves on the Element of Pain in Intestinal Obstruction.*—Mr. Fred. Treves, in the *Brit. Med. Jour.*, July 1884, p. 62, contributes an able article on the subject of pain in cases of intestinal obstruction. This may be due to four conditions: 1, direct damage to the peritoneum and bowel, as by strangulation; 2, irregular and disordered peristaltic movements; 3, distension of the bowel above the obstruction; 4, inflammatory changes in the intestine and peritoneum. The pain due to the first condition is, without doubt, the most intense that is met with in intestinal obstruction. The pain is generally localised, and by some authorities is supposed to point to the seat of the lesion; but the author considers that the localisation indicates a reflection of the pain to the great abdominal nerve-centres. With regard to the second condition, the pain depending upon disordered peristalsis is more severe in cases in which the small intestine is involved, owing to the greater muscular development of that part of the bowel as compared with the colon, and on account of the greater activity of the small intestine and its superior nerve-supply. In the diagnosis of intestinal obstruction, a very important distinction is pointed out with reference to the character of the pain. When the obstruction in the bowel is complete, the pain experienced is constant, with periodic exacerbations. When the obstruction is incomplete, the pain is intermittent, and there are intervals of freedom from pain of varying duration. With regard to the pain of conditions 3 and 4 the author deals very briefly. The pain from distension is continuous, is very diffused, and associated with tenderness on pressure, but this may be insignificant. The pain due to inflammatory changes has, as a rule, a marked degree of tenderness.

3180. *Pearson on a New Knee-cap for the After-treatment of Lateral Dislocation of the Patella.*—Dr. Pearson, in the *Lancet*, July 1884, p. 12, describes a new appliance for preventing the recurrence of lateral dislocation of the patella. A drawing is given of the appliance, but the following directions will enable anyone to make it for himself. Take a piece of the most dense variety of poroplastic, about 5 inches square; cut it in the form of a letter U inverted, the concavity being made larger than the patella; then heat it in the usual manner till soft enough to be moulded; place it on the limb, held in a slightly flexed position; by now approximating the ends and pressing back the convex border, the necessary shape can be readily imparted to it. The covering and fixing of the necessary straps can be done by any shoemaker.

3181. *Teale on Abscess of Lung Cured by Incision and Drainage.*—Mr. Teale, in the *Lancet*, July 1884, p. 6, publishes a case of abscess of the lung cured by incision and drainage. The patient, a man aged 54, had suffered from pleurisy for some months, and it was at last decided to tap the chest. The right side of the thorax was punctured low down, but only a few drops of clear straw-coloured fluid escaped; a fresh puncture was then made higher up, when some very offensive fluid escaped, and after some difficulty a pint of pus was drawn off. It was now decided to open and drain the thorax. An incision was made a little below and in front of the angle of the scapula, but no pus escaped until the lung was punctured; the opening into the lung was then enlarged so as to admit the finger, and two pints of most fœtid pus escaped. A large drainage-tube, about 6 inches long, was inserted; the cavity was then syringed out with a weak solution of carbolic acid, and the chest encased in carbolised tow. For some months the patient's condition was very critical, the symptoms being mainly those of septicæmic poisoning; eventually the wound healed up entirely in about four months. Within nine months of the operation the patient had resumed his active work as a solicitor.

3182. *Smith on the Fixation of Movable Kidney by Scratching its Capsule through the Loin.*—Mr. Greig Smith, in the *Lancet*, July 1884, p. 10, publishes notes of the following case. A woman, aged 39, was admitted into the Royal Infirmary at Bristol. A year before admission, she noticed a tumour in the abdomen on the right side, usually under the ribs, but occasionally low down near the crest of the ilium. The facility with which the tumour could be pushed down into the pelvis suggested the possibility that it might turn out to be ovarian, and Mr. Smith recommended abdominal section, to remove it if not renal, to fix it if renal. This was done, and the tumour turned out to be renal. There was no meso-nephron proper, and the kidney was found very freely movable. An attempt was made to stitch the organ to the loin, but this failed, and the capsule was well scratched with a needle, and placed in the loin. The inflammation thus produced sufficed to maintain the kidney in its place; but the patient did not derive any marked benefit from the operation, although she made a good recovery.

3183. *Marshall on Washing out the Bladder.*—In the *Lancet*, July 1884, p. 48, Mr. J. Marshall suggests a plan for obviating the discomfort caused in cases of perineal section for cystitis, as recommended in Sir Henry Thompson's lectures, where the bladder has to be irrigated through a tube, which is always slipping out. Mr. Marshall passes a large sized drainage-tube, with a bevelled end, through the hole

in the little shield supplied with the ordinary Higginson's syringe ; through the end of this is passed a safety-pin, which is secured with a thin strip of plaster to the shield. A piece of protective silk is placed over the wound, a hole being cut in the centre for the tube ; and the shield is kept in position by tapes passed through the holes at the ends, and fastened in the usual way to an abdominal bandage. By this means the tube is kept in its place, and the urine passes only through it, instead of dribbling past it into the bed. The other end is carried into a convenient vessel, and the washing out process is easily performed.

3184. *Sands on Operation for Varicocele.*—In the *New York Med. Jour.*, March 29, 1884, Dr. Sands describes the following operation for the cure of varicocele. The distended veins are obstructed by a catgut ligature applied subcutaneously. It is made to surround the veins by first transfixing the scrotum with a needle, and carrying the thread between the vas deferens and the veins : the needle having been passed through the scrotum, carrying the thread with it, is then passed in the opposite direction, from behind forward, entering and emerging through the same cutaneous punctures ; but, instead of passing between the vas deferens and the veins in returning from behind forward, it is made to pass on the opposite side of the veins, so that when the ligature is tightened the veins are firmly constricted. The ligature and dressings are antiseptic.

3185. *Poland on Dislocation of the Sternal End of the Clavicle Backwards and Upwards.*—Dr. Poland, in the *Lancet*, July 1884, p. 104, reports the case of a man, aged 20, who was wrestling with another man, when both fell, the patient being underneath. Pain was felt in the right shoulder ; and on examination, the right shoulder was found to be slightly lower than the left, and projected more forwards. There was a well-marked depression at the right sterno-clavicular articulation, and the sternal end of the clavicle could be felt beyond this, and at about three-quarters of an inch higher level than the corresponding articulation, the trachea apparently being pushed to the left side. Reduction was effected by placing the knee in the hollow between the two scapulæ, taking firm hold of the upper part of the arm and shoulder, and bringing them backwards and a little upwards. There was some difficulty in keeping the parts in position, but at the end of four weeks only a slight depression could be felt over the articulation. The remarkable feature in this case was the absence of dyspnœa, which was due to the head of the bone forcing the trachea to one side instead of directly pressing upon it.

3186. *Shearer on a new Method of Treating Sprains.*—Mr. Shearer, in the *Lancet*, August 1884, p. 233, writes that he has adopted a new agent (clay) in the treatment of sprained limbs. Powdered clay is mixed with water, so as to form a thick and moist consistence. This is spread on muslin to the depth of a quarter of an inch, and applied entirely round the part. Over this is placed a rubber-roller bandage, just lightly enough to keep the dressing from shifting, and to retain the moisture. At the end of twenty-four to thirty-six hours the dressing must be removed. Three cases are recorded in which the above treatment answered exceedingly well. The author also states that powdered dry earth sprinkled on the surface of an ulcer, and adhesive straps applied over it, is a capital dressing for cases which are so weak that even the weakest ointments tend to break down the granulations. In the *Lancet*, August 1884, p. 306, Mr. Dinin writes that the efficacy in Mr. Shearer's method does not lie in the clay, but in the compression applied through the clay to the injured joint by the rubber-roller bandage. The method without the clay was first applied by M. Marc Sée, who described it as a compound treatment—combining rest with rubbing—in the *Revue de Chirurgie*, Jan. 10, 1884.

3187. *Brown on a Case of Separation of the Anterior Superior Iliac Spine by Muscular Action.*—Mr. Haig Brown, in the *Brit. Med. Jour.*, August 1884, p. 320, reports the case of a strong boy, aged 17, who was long-jumping in some sports. Just as he was commencing to jump, after having finished his run, he felt a sudden snap on the right side of the pelvis and fell, being in great pain. On examination, it was found that the patient was unable to stand ; and though each hip-joint moved naturally, there was pain in the lower part of the abdomen on moving the right hip. A rough piece of bone was felt to be in the place of the anterior superior spine of the right ilium. All around this was a considerable hæmatoma, while the iliac spine itself was distinctly felt displaced upwards and a little inwards. The patient was kept on his back for ten days, the right hip-joint being fixed with a stout spica bandage, and a pad of lint assisting to keep the displaced fragment in position. At the end of a fortnight, the patient was allowed to move about a little, the hip-joint being fixed with a well-made elastic spica bandage. After eight weeks the support was left off, and the patient felt strong and well as before. [At sect. 1,706 : 4 *Medical Digest* a similar case is recorded.]

3188. *Smith on the Excision of Portions of Tendons of Partially Paralysed Muscles.*— Mr. Noble Smith, in the *Brit. Med. Jour.*, June 1884, p. 1253, writes, that in several cases where a muscle has been quite useless from partial paralysis, and where the foot has been cold and flaccid, he has found that simple subcutaneous section of a tendon has had the effect of rapidly increasing the warmth of the foot, and of so improving the nutritive condition of the muscle, that its functions have been restored.

3189. *Lewellin on the Use of Perchloride of Iron in the Treatment of Varicose Veins.*—Mr. Lewellin. in the *Lancet*, August 1884, p. 307, draws attention to an article in the *Lancet*, June 6, 1874, p. 791, where it is stated that M. Linon, of Verviers, had used perchloride of iron with great success in the treatment of varicose veins. The author has adopted this plan for the last ten years, and relates how he has lately cured an old gentleman, aged 70, who had suffered from varicose veins for forty years. Pieces of strapping were drawn across an ulcer which had appeared at the lower part of the leg, and then pieces of absorbent lint two or three inches long, slightly rolled, soaked in the solution of perchloride of iron, were applied as compresses, lengthwise, on the veins. They were kept *in situ* by a bandage of thin flannel, which was reapplied every day for a week, then every other day. At the end of a fortnight the varices had all disappeared, and the veins could be felt as hard cords under the skin. In six weeks the ulcer was healed ; the patient can now take long walks, and is able to attend to business.

3190. *Mac Cormac on Thyroidectomy.*—In the *Brit. Med. Jour.*, August 1884, p. 222, is published

the address of Sir William Mac Cormac to the Section of Surgery at the annual meeting of the British Medical Association, held in Belfast. The manner of excising the thyroid gland is discussed on p. 228. The old method of slitting open the capsule, enucleating the mass as quickly as possible, and tying the pedicle *en masse*, is open to objections. Sir Wm. Mac Cormac advises that all bleeding joints should be tied as they arise ; that the enlarged veins should be divided between a double ligature, and only after they have been thoroughly exposed ; that the four principal arteries, as well as, in some cases, an enlarged thyroidean vessel, should be secured by immediate ligature. The operation is explained in detail, and woodcuts are given showing how the incisions are to be made, and where to tie the vessels. An interesting case is noted, showing how large a tumour can be removed, leaving very slight disfigurement. The value of dividing the isthmus alone, as suggested by Mr. Sydney Jones, *Lancet*, November 1883, p. 900, is confirmed by Sir W. Mac Cormac's observation.

3191. *Modern Treatment of Hydrocele.*—In the *Philadelphia Med. News*, May 3, 1884, a review is given of the various modes which have been adopted during the last few years of treating hydrocele. The plan of antiseptic incision, frequently resorted to in Germany, is stated to be too severe for ordinary cases. It ought to be reserved for cases in which the tunica vaginalis is much thickened, and for examples of recurrence after the employment of simpler methods. It is suggested that the injection of from 30 to 60 grains of liquefied carbolic acid, as a curative measure, will prove to be the simplest, safest, and least inconvenient of all the measures hitherto employed.

3192. *Verneuil on the Treatment of Hæmorrhoids.* In the *Gaz. des Hôp.*, May 8, 1884, a lecture of Professor Verneuil on the treatment of hæmorrhoids is published. The author follows up the various methods employed, showing their advantages and disadvantages, and sums up his remarks by stating that he has of late years adopted the practice, instituted by Maisonneuve, of dilating the anus. Professor Verneuil argued that it was sufficient to cause a cessation of the muscular contraction of the internal sphincter of the rectum, thus relieving the strangulation, and allowing the hæmorrhoid to empty itself, the circulation being thus re-established to its normal condition. This principle was put into practice, the lower fibres being first dilated, then the upper ones, first by Ricord's speculum, then with that of Lisfranc. The result was remarkable, a radical cure being obtained without any danger in a week.

RICHARD NEALE, M.D.

3193. *Egoroff on the Treatment of Incarcerated Hernia by Elastic Bandage.*—In the *Meditz. Obozr.*, Fasc. ix., 1884, p. 925, Dr. Egoroff, of Sarapol, describes five cases of incarcerated inguinal hernia (four females, one male), in which, after posture, taxis, chloroform, faradisation, and ether-irrigation had failed, he obtained a speedy and easy reduction by means of the application of Esmarch's bandage after the method recommended by Dumont. In each of the cases, the tumour being covered with cotton-wool, two circular turns of elastic bandage were made round the hernia, and then the whole inguinal region was bandaged crosswise. In addition, an enema of two or three pounds of ice-water was administered, and the patient's pelvis and lower limbs were considerably raised. The symptoms of incarceration disappeared, and a considerable improvement ensued, rather rapidly. The bandage was left *in situ* generally about twelve to fifteen hours, and when it was removed no trace of the hernia was seen.

3194. *Vishnevsky on a Case of Foreign Bodies in the Digestive Tracts.*—Dr. F. D. Vishnevsky, of Sapojok, reports (*Meditz. Obozr.*, Fasc. ix., 1884) the case of an imbecile peasant, aged 60, who swallowed, first, a piece of linen, about 23 centimètres long and 10 centimètres broad, and some hours later a folded penknife, with two broken blades, 9 centimètres in length, and 4½ in breadth. The foreign bodies were expelled after nine and ten days' sojourn in the alimentary canal, having caused no symptoms whatever. The appetite remained all the time very good ; the bowels were moved regularly once daily. The same patient on two previous occasions swallowed and passed, once, six rings tied together in a chain, and another time several thick and broad iron teeth from a threshing machine.

3195. *Posadsky on the Treatment of Aortic Aneurism by Clay-Cakes.*—Like Drs. S. P. Botkin, Sokoloff (*see* the LONDON MEDICAL RECORD, April 1882, p. 144), Masalitinoff (*ibid.*, November, p. 452), and Saveljeff (*ibid.*, 1883, February, p. 47), Dr. Posadsky saw (*Vratch*, 1884, No. 26) several times favourable results following the application of clay-cakes. He reports the case of a gatekeeper, aged 53, with an unmistakable aneurism of the ascending aorta, in whom twenty days' use of clay-cakes caused the reduction of the tumour to half of its original size. Pain, dyspnœa, and difficult respiration disappeared altogether, and the patient left the hospital feeling almost well. He continued to apply the clay for the next two and a half months, and, in spite of his resuming his heavy occupation, the tumour diminished still further.

V. IDELSON, M.D.

3196. *Tripier on the Treatment of Hypertrophied Prostate.*—The author (*Lyon Méd.*, No. 31, 1884) has obtained good results from the use of the faradic current. He introduces one electrode into the prostatic portion of the urethra and the other into the rectum ; sometimes both into the latter cavity. Each sitting lasts five minutes, and the current must not be strong enough to cause pain.

J. S. KAESER, M.D.

3197. *Gross on the Treatment of Stricture of the Œsophagus.*—The following statement is given at the end of an instructive article on treatment of stricture of the œsophagus, by Professor Samuel Gross, of Philadelphia (*American Journal of the Medical Sciences*). The author of this article states that he has endeavoured to examine the subject of operative interference in carcinomatous and cicatricial strictures of the œsophagus in a judicial and impartial spirit ; and in arriving at the general conclusion that gastrostomy is at once the easiest, safest, and most permanently beneficial of all the procedures that have been proposed in modern times, he desires it to be understood that this opinion is based solely upon results, and not upon a preconceived favourable opinion. The following results have been obtained by the author with regard to operative interference for obstruction of the œsophagus from all causes. Two hundred and seven gastrostomies had afforded 61 deaths as a result of the procedure, being a mortality of 29·47 per cent., and prolonged life for 82 days, on an average, at the close of the last reports : 32 œsophagotomies yielded 19 deaths, a mortality of 59·37

per cent., with a mean life of 52 days; 19 internal œsophagotomies were followed by 6 deaths, or a mortality of 31·57 per cent., and an average life of 256 days; 5 combined œsophagotomies resulted in 2 deaths, a mortality of 40 per cent., and a mean life of 168 days; 5 œsophagectomies afforded 3 deaths, a mortality of 60 per cent., and an average life of 50 days; 3 retrograde divulsions up to the date of the last reports show a mean life of 22 days, all having been successful. Hence 271 examples of operative interference have yielded 91 deaths, or a mortality of 33·58 per cent., and an average prolongation of life of 90 days.

W. Johnson Smith.

3198. *Rogers on a New Method of Procedure in Operating for Vesico-vaginal Fistula.*—Dr. W. B. Rogers (*Mississippi Valley Med. Monthly*, Vol. iii., No. 1), says that, in a case of extensive vesico-vaginal fistula, he employed a colpeurynter to fix the wall of the bladder and the vaginal septum. The fistula being large, he threaded the eye of a catheter with a piece of suture-silk, and passed the catheter and silk through the urethra into the bladder and through the fistula into the vagina. Then, holding the silk with a forceps, he withdrew the catheter; and, looping the silk around the stem of the colpeurynter, he readily drew the colpeurynter into the bladder. The patient had previously been anæsthetised. Once in place, the colpeurynter was inflated, and served the purpose of fixing the septum and replacing the prolapsed mucous lining of the bladder. The Sims' speculum was used to display the fistula. After paring the edges of the fistula and inserting the wires, the colpeurynter was allowed to collapse and was withdrawn through the fistula. A thinner rubber could be passed through the urethra if the fistula were small, even if it became necessary to dilate the urethra in order to do so.

3199. *Garnet on Aspiration of the Bladder.*—Dr. A. H. Garnet (*Cincinnati Lancet and Clinic*, Jan. 6, 1883), says, after having tried in vain to relieve a patient suffering from retention of urine, he was about at his wits' end, when the aspirator was brought out. (Miller with the stomach pump combined.) The needle was detached and the rubber attached to a catheter, previously introduced into the bladder. The aspirator was then worked upon the principle for which it was devised, and the powerful suction not only dislodged the clots, but drew them through the instrument; and they were discharged along with the urine through the escape tube of the aspirator, to the relief of both surgeon and patient.

MEDICINE.

RECENT PAPERS.

3200. Atkinson. — Epidemic Spasmodic Cough of Septic Origin. (*Lancet*, July, p. 90.)

3201. Yeo.—Catarrhal Conditions of the Respiratory Passages. (*Med. Times and Gaz.*, July, p. 37.)

3202. Coates. — Nervous Breathing. (*Brit. Med. Jour.*, July, p. 13.)

3203. Mundie. Isolation of Enteric Fever Cases. (*Lancet*, July, p. 47.)

3204. Bleeding in Scarlatinal Uræmia. (*Lancet*, July, p. 46.)

3205. Ranking. The Relations between the Spleen and the Thyroid Body. (*Lancet*, July, p. 127.)

3206. Anderson.—Nocturnal Incontinence of Urine. (*Australian Med. Jour.*, March.)

3207. Richardson.—Intermittent Pulse as a Sign of Disease. (*Asclepiad*, July, p. 193.)

3208. Duckworth.—The Nosological Relations of Chronic Rheumatic Arthritis. (*Brit. Med. Jour.*, August, p. 263.)

3209. Granville.—The Mental Element in the Etiology of Gout. (*Lancet*, August, p. 272.)

3210. Harkin.—The Pathology and Treatment of Cholera. (*Lancet*, August, p. 270.)

3211. Wakefield.—On Cholera. (*Lancet*, August, p. 257.)

3212. How to Prevent and Oppose the Cholera.

3213. Baréty.—On Œsophageal Auscultation as an aid to Thoracic Diagnosis. (*Revue de Méd.*, August.)

3214. De Beurmann.—On a Case of Rabies in the Human Subject. (*Revue de Méd.*, August.)

3215. Weil.—Pleuritic Hemichorea. (*Revue de Méd.*, July.)

3216. Lemaigre.—A Rare Form of Rash observed in Typhoid Fever. (*Jour. de Méd. et de Chir. Prat.*, 1884.)

3217. Ziehl.—The Pneumococcus in Sputa. (*Centralbl. für die Med. Wiss.*, 1884, No. 7.)

Art. 3200. *Atkinson on Epidemic Spasmodic Cough (?) of Septic Origin.*—In the *Lancet*, July, 1884, p. 90, Dr. Atkinson, of Surbiton, writes asking for information respecting a peculiar epidemic of spasmodic cough which had been prevalent during the last three or four months. In each case there was first of all loss of voice, followed by irritation of the throat, about the upper part of the sternum, and a dry spasmodic cough, like whooping-cough, without the whoop. Sometimes, after the lapse of two or three weeks, there followed night-sweats, loss of appetite, and a thick, copious expectoration. The temperature kept rising and falling irregularly, indicating some septic origin (?). In the way of treatment, most benefit was derived from the use of Fletcher's syrup of the hydrobromate of iron and quinine.

3201. *Yeo on Catarrhal Conditions of the Respiratory Passages.*—In the *Med. Times and Gazette*, July 1884, p. 37, a lecture by Dr. Burney Yeo is reported, in which the author treats of catarrhal conditions of the respiratory passages. In cases of laryngeal catarrh, where there are a tickling cough and difficulty in swallowing, with hoarseness or impairment of the voice, much advantage will be found from the use of warm alkaline drinks, in thinning the tenacious adhesive mucus which often hangs about the glottis. A good prescription is suggested. ℞ Sodæ bicarb., ʒj.; sodii chloridi, gr. xviii.; spiritûs chloroformi, gr. xxx.; aquam anisi ad ʒvj. An ounce to be taken every two or three hours in hot water or milk. In the early stages of acute bronchial catarrh, the author knows of no remedy which relieves the distressing dryness of the mucous membrane so completely as tartarised antimony. The following prescription is given. ℞ vini antimon., ʒiij.; liquor. morphiæ acetat., ʒij.; liquor. ammoniæ acetat., ʒvj.; aquæ lauro-cerasi, ʒij.; syrupi mori, ʒss.; aquam ad ʒvj. Half an ounce every two to three hours; to be given less frequently as the symptoms are relieved. If there be much fever, a few drops of tincture of aconite may be added. The following is a suitable formula for a spray, in order to relieve excessive hyperæsthesia with constant tormenting, tickling cough. ℞ Extracti conii maculati, gr. iij. (dissolved in rectified

spirit); aquæ lauro-cerasi, ℥xx.; potassæ bicarbonatis, gr. viij.; aquæ destil., ℥j. To be inhaled every two to three hours.

3202. *Coates on Nervous Breathing.*—Mr. Martin Coates, at the annual meeting of the Southern Branch of the British Medical Association, took for the subject of his address, as president, hysterical or nervous breathing. In the *Brit. Med. Jour.*, July 1884, p. 13, a description of some of the cases, cited by Mr. Coates, is given. The affection is not frequently met with. The slightest cases seem to give rise to fears of phthisis, if there be cough. The characteristic features are generally cough, with or without blood-spitting, which, if present, is usually of a venous character, with very rapid and very shallow breathing, and absence as a rule, of physical signs of disease.

3203. *Mundie on Isolation of Enteric Fever Cases.*—Dr. Mundie, in the *Lancet*, July 1884, p. 47, asks whether enteric fever cases should be isolated, and gives details of the following series of cases. A lady, living in the East End of London, contracted typhoid fever from which she died in three weeks. During the latter part of her illness, her sister, residing at Dalston, was in constant attendance upon her. A few days after the sister returned home, she was found to be suffering from enteric fever, from which she died. On this patient, another sister living at Islington was most assiduous in her daily attentions. She also sickened soon after returning home, and succumbed to the disease. [Several other cases similar to the above are quoted in subsequent numbers of the *Lancet.—Rep.*]

3204. *Bleeding in Scarlatinal Uræmia.*—In the *Lancet*, July 1884, p. 46, a case is recorded of a boy, aged 12, who was suffering from scarlatinal dropsy. Convulsions set in before the medical man visited the patient. Twelve leeches were ordered at once to be applied to the head, bitartrate of potash as a purge, and sinapisms over the kidneys. The convulsions, however, became so violent that it was decided to take twenty ounces of blood from the arms. This had a good effect, but within twenty-four hours the convulsions recommenced. Five more ounces of blood were then withdrawn, and afterwards six more ounces. A fly blister was also applied to the occiput, to relieve basilar trouble. Iron and quinine mixture was also given, and in five days the albumen had disappeared from the urine and the patient was convalescent. [The value of bleeding in such cases as the above is well illustrated by cases recorded in the *Medical Digest*, sect. 78 : 5.—*Rep.*]

3205. *Ranking on the Relation between the Spleen and the Thyroid Gland.*—Dr. Ranking, in the *Lancet*, July 1884, p. 127, writes that in 1881 and 1882 he was in a district where goître is endemic, and among upwards of 2,000 cases of goître of all kinds not a single case of anæmia was noted in a goîtrous subject. The author remarks that, if there were any identity of function of the spleen and thyroid, similar changes in the two organs would produce similar effects on the blood. Again he notes, that in India splenic enlargement is almost exclusively malarial; thyroid enlargement, on the other hand, owns no such cause; also that constitutional treatment, which with certainty reduces an enlarged spleen, has not the slightest effect on the enlarged thyroid body. [Those interested in this subject will do well to consult papers by the reporter and others, vide *Medical Digest*, sect. 1698 : 5, wherein the condition of the blood in cases of goître is shown to be strikingly analogous to that found in cases of splenic hypertrophy.—*Rep.*]

3206. *Anderson on Nocturnal Incontinence of Urine.*—In the *Australian Med. Jour.*, March 1884, Mr. Anderson calls attention to a plan of treating nocturnal incontinence of urine. At the head of the bed a battery is placed, to the poles of which two long insulated wires are attached; these pass underneath the pillow and down the patient's back, terminating in two small exposed copper loops placed at a little distance apart on the perinæum. One of these wires, before reaching the perinæum, is brought round to the pubes, and then passes down inside a small India-rubber bag, shaped like the upper part of an ordinary male urinal, but closed at the bottom. At the lowest part of the bag this wire is filed quite through, leaving the two metallic ends exposed, about an eighth of an inch apart. Into this bag the penis is put. The battery is set in motion, and the patient goes to sleep. As soon as the smallest drop of urine is voided, it immediately passes to the bottom of the pouch, fills the interspace between the filed ends of the wire, and so completes the circuit. Immediately the perineal muscles contract, and the patient is awakened. After a time, a cure is produced by this means.

3207. *Richardson on Intermittent Pulse as a Sign of Disease.*—Dr. B. W. Richardson, in the *Asclepiad*, July 1884, p. 193, contributes an able article on 'Intermittent Pulse.' The author states that, if it occur in infancy, it is an important indication of the existence of serious nervous derangement. Occurring in young adults it has the same meaning, and tells the story of commencing failure of power. In five cases, the author has known it to be the first physical indication of derangement of mind in which suicide was attempted. In persons advanced in life, and in persons prematurely old, intermittency is often the herald of symptoms of nervous failure. Persons in whom there is permanent intermittent action of the pulse, pass through all acute diseases with less chance of recovery than others of similar age and like constitution who have no such failure. The author also states that he has often noticed the hereditary character of the phenomenon. With reference to treatment, there is no known specific method. Excitement should be avoided, and in cases where there are symptoms of cerebral congestion, depletive measures are sound. Nothing relieves the intermittent action of the heart so rapidly as alcohol judiciously administered, and nothing clenches the affection more decisively than alcohol indiscriminately prescribed. All alcoholic fluids as beverages must be avoided; but, if the case demand it, then at bed-time half an ounce of pure alcohol in warm water will often act most effectively. The subject of diet, clothing, &c., is carefully gone into, thus completing a most interesting paper.

3208. *Duckworth on the Nosological Relations of Chronic Rheumatic Arthritis.*—In the *Brit. Med. Jour.*, Aug. 1884, p. 263, a report is given of Dr. Dyce Duckworth's introduction to a discussion in the Section of Medicine at the annual meeting of the British Medical Association. The author treats of the malady with regard to its relations to other forms of arthritis, whether of rheumatic or of other origin, and defines rheumatoid arthritis as 'essentially a chronic form of joint-disease, affecting both small and large, one or many, articulations. It may begin insidiously, with pain and swelling gradually increasing, or it may begin by more acute

local symptoms. The tissues of the joint are affected by a chronic, and often progressive inflammation, beginning first in the synovial membrane, affecting next the articular cartilage, and this, perhaps, in most cases more severely than any other texture; then the ligamentous structures; and, lastly, the ends of the bones.' The pathological origin of the disease is discussed at some length, and the views of Dr. Pye-Smith, Dr. Fuller, Mr. Hutchinson, and Dr. Ord are explained. Speaking of treatment, the author states that little good will be gained, unless attention be paid to the condition of general nutrition and of the nervous system. In addition to good and varied diet, including free use of foods containing sulphur, such as onions, cruciferous vegetables, and especially mustard, a sheltered, dry, and somewhat high locality should be sought. Cod-liver oil, iodide of potassium, pushed to doses of 10 or 15 grains, iron, arsenic, and sulphur, are among the best drugs to be employed. Counter-irritation in the earlier stages, with blisterings, and the actual cautery, are highly beneficial. The salicylates are valuable for the worst pains at the outset, while opium and the bromides do most for the weariness of those in the advanced stages. Drs. Davidson, Ord, Gordon, Lorimer, and others took part in the discussion which followed the reading of the paper; and Dr. Duckworth, in summing up, accentuated the conclusions at which he had arrived respecting the disease: viz., that it was a specifically true rheumatism, occurring in persons of a rheumatic habit of body; that it could be set up indiscriminately in all persons; that it undoubtedly occurred as a sequel to true rheumatic fever in a small percentage of the cases; and that the conception of it as a mixture of rheumatism and gout, or a hybrid malady, was for the large majority of cases an unwarrantable error.

3209. *Granville on the Mental Element in the Etiology of Gout.*—Dr. Mortimer Granville, in the *Lancet*, August 1884, p. 272, writes that in the *Lancet*, April 23, 1881, he propounded a view which now seems likely to be generally accepted with regard to the etiology of gout: viz., that an uric acid centre, either eliminative or destructive, exists, and is probably located beneath the floor of the fourth ventricle, not far from, and in functional relation with, the so-called 'diabetic' and polyuric centres. The author suggests that the treatment of gout in all its forms should be based on the recognition that the uric acid can only be got rid of by a process of oxygenation, and that it must pass off by the kidneys, never by the bowels. The following prescription is advocated for the relief of acute and subacute cases of gout: ℞ ammonii chloridi, ʒiv.; potassæ chloratis, ʒij.; glycerini ʒxij.; tincturæ iodi, ʒij.; aquam ad ʒxij. An ounce to be taken every fourth or sixth hour.

3210. *Harkin on the Pathology and Treatment of Cholera.*—Dr. Harkin, in the *Lancet*, August 1884, p. 270, writes that whatever may be the primary or remote cause of an attack of cholera, whether miasm or bacillus, the influence of the nervous system becomes rapidly manifested. The disease and its treatment divide themselves into three stages: the preliminary, or diarrhœal; the stage of violent purging and vomiting, and cramps; and that of collapse. Nothing answers so well in the diarrhœal stage as dilute sulphuric acid, given every hour in doses of 20 to 30 minims, with mustard or turpentine epithems to the abdomen, and iced water to drink *ad libitum*. In the second stage, the author believes that stimulation of the vagus is the best method of treatment, and consequently he treats every case of English cholera by remedies applied to the pneumogastric nerve in the cervical region, with the satisfactory result of stopping at once the vomiting and purging of this stage. The application used is the Liquor Epispasticus of the *Pharmacopœia*, applied freely with a brush, behind the ear and in the neck, as far as the angle of the lower jaw. For the stage of collapse, it is recommended to use a subcutaneous injection of a solution of chloral-hydrate, 10 grains in 100 parts of water, in four or five different places; and, if reaction do not commence in an hour, the injection must be repeated.

3211. *Wakefield on Aerial Infection of Cholera.*—Dr. Wakefield, in the *Lancet*, August 1884, p. 257, writes that he considers that the air is the chief agent by which cholera is diffused. In the author's experience he has seen cholera cases appear simultaneously in various houses and in barracks at a station where none existed before. Not only did these cases appear all within the same hour, usually in the night time, but, taking a line from the house on the outermost part of the station, it was found that the epidemic followed a straight line, or sometimes a diagonal course, through the whole line, as if wafted through the open doors or windows in a current of air. In one instance, in India, a cholera epidemic broke out in a town directly after a dust-storm had passed over it, not a single case having previously existed for miles round for a considerable time.

3212. *How to Prevent and Oppose the Cholera.*—The National Health Society has prepared a memorandum explaining 'How to Prevent and Oppose the Cholera.' It is drawn up in the shape of a pamphlet, 1,000 copies of which the Society supply for the cost of *1l. 1s.* to anyone who will undertake to distribute them from house to house. Instructions are given as to the best means of guarding against accumulations of dirt within or near the house. Sinks should be trapped, and waste-pipes should not lead into the drain, but pass through the wall and discharge into the open air, over a trapped gully communicating with the drain. Water should not be drunk from cisterns which are not clean; all water should be filtered, or, preferably, boiled. Attention must be paid to food and drink, and to personal cleanliness. Should a case appear in a house, precautions are given as to the primary treatment until a medical man is obtained, also the various necessary precautions to be attended to in the sick room in treating with discharges from the bowels and stomach. Everyone should possess this little pamphlet. We none of us know how soon cholera might appear amongst us, and, by attending to a few hints, much trouble would be averted.

Richard Neale, M.D.

3213. *Baréty on Œsophageal Auscultation as an Aid to Thoracic Diagnosis.*—In the *Rev. de Méd.* for August, Dr. Baréty calls attention to the primary results of his studies upon œsophageal auscultation as an additional means of diagnosis in thoracic diseases. By the application of the stethoscope on each side of the spine between the scapulæ, a gurgling sound, somewhat more marked on the left than on the right side, is normally heard during deglutition. This sound Dr. Baréty has studied in respect of its intensity, pitch, and quality, and their modifications in the presence of morbid conditions

of the thorax. His studies are as yet incomplete, but so far they lead to the conclusion that the intensity is increased in conditions of intrathoracic solidification about the region auscultated, among which he specially mentions tuberculous induration and engorgement of the tracheal and bronchial glands. The pitch is affected in cases of pleuritic effusion. Speaking generally, the pathological signification of the modifications produced in the sounds of deglutition is identical with that of the modifications customarily presented by the respiratory sounds. Dr. Baréty promises for a future occasion the results obtained by a study of the œsophageal sounds, as they are modified in all other pulmonary affections, pneumonia, bronchial dilatation, pulmonary sclerosis, emphysema, pneumothorax, and hydropneumothorax, cancer, hydatids, pulmonary cavities, &c.

3214. *De Beurmann on a Case of Rabies in the Human Subject.*—In the *Revue de Méd.* for August, M. de Beurmann records the case of a woman who died in twenty-four hours from hydrophobia under extraordinary circumstances. The patient was 43 years of age, and sixteen and a half months before she was attacked had lost by undoubted hydrophobia her favourite spaniel, which as soon as the disease was confirmed was kept in durance until its death, by M. Bourel, a veterinary surgeon, who vouches for the fact that the animal was unmistakably rabid. The case as reported by M. de Beurmann presents interesting peculiarities upon three points. Firstly, the extremely long period of incubation—upwards of sixteen and a half months since the inoculation—was proved by the fact that the animal died fully that period before the development of the confirmed disease in the patient; and that, though after a lapse of time she ceased to think anything further of the inoculation or its consequences, she was careful in future to altogether avoid contact with dogs. The second noticeable point is the fact that, although the incubation was so long, the conditions were those which have hitherto been supposed to shorten the quiescent period; namely, mature age on the part of the patient, and a seat of inoculation near the nervous centre. In the case in question, this was a sore on the upper lip which had been licked by the spaniel while suffering from early symptoms of the disease, the nature of which was then unknown. In this latter connection the author also refers to a case of M. Landouzy where, although the patient was bitten in the cheek close to the eye, the symptoms were sixty-eight days in declaring themselves, whereas in three cases recorded by the same author, when the patient was bitten in the hand, symptoms appeared in sixty, forty, and thirty-nine days respectively. The third point is one which leads the author to an hypothesis having undoubtedly strong support from analogy. He points out that, though distinctly hydrophobic symptoms did not appear for sixteen and a half months after inoculation, the patient's history shows psychic disturbance and alteration in character for upwards of five months previously. She had become restless, irritable, emotional, anxious, had lost her appetite and power of sleep, and given herself up to exaggerated religious observances. She quarrelled with her workpeople, was anxious out of all proportion to her responsibilities, and was a prey to extreme fatigue and agitation for some time prior to the pharyngeal spasm which marked the onset of the disease. The author points out that M. Roux, in his thesis upon hydrophobia, calls attention to the singular manifestations at times afforded by rabid patients, more particularly when the inoculation is intravenous. They may be limited to local or general paralyses, to convulsions, to incessant itchings, without presenting any of the ordinary symptoms of hydrophobia of either the furious or the morose type. On this point M. de Beurmann adds: 'It would be interesting to note with care the very numerous cases in which the bite of rabid animals is not followed, at least apparently, by any effect. Possibly attention directed to the victims might disclose in their manner some unwonted symptoms referable to rabies, and the existence of such abortive symptoms might lead to a belief in the existence of slight or spontaneously curable cases.' Further, he says: 'From this point of view it is of equal importance to ascertain if, in cases of very prolonged incubation, such as the one which forms the subject of this paper, the onset of confirmed symptoms be not preceded by a series of prodromata more or less premature. These premonitory accidents would so far shorten the apparent period of dormancy of the virus, and would greatly facilitate the true understanding of these extraordinary cases.' [While admitting the ingenuity and probability of the author's hypothesis respecting the shortening of abnormally long periods of incubation by the supposition of at present ill-understood prodromata, it is not to be lost sight of that he tells us in his history of the case in point that the patient's lip, at first inflamed, after cauterisation with nitrate of silver cicatrised regularly. Cauterisation, insufficiently extensive and powerful to entirely destroy the virus, should not be completely ignored as a *possible* factor in the lengthening of the dormant stage.—*Rep.*] KENNETH MILLICAN.

3215. *Weil on Pleuritic Hemichorea.*—Numerous cases have been reported by Landouzy and others, in which symptoms of hemiplegia had followed the repeated injection of antiseptic fluids into the pleural cavity. The author gives, in the *Revue de Méd.* for July 1884, the history of a patient who had undergone three times Estlander's operation for empyema, and in whom the left pleural cavity had been washed out repeatedly. Soon after the first operation, choreic movements and paresis were observed in the left arm, and later on symptoms of inco-ordination appeared in the left leg.

3216. *Lemaigre on a Rare Form of Rash observed in Typhoid Fever.*—The author has described in his inaugural dissertation (*Jour. de Méd. et de Chir. Prat.* 1884) some cases of typhoid fever in which a peculiar rash similar to that of scarlet fever or measles was observed in the neighbourhood of the elbow-joints, and sometimes in other situations. It lasted about a week, and was followed by desquamation. This rash has been considered by some observers as a manifestation of syphilis or rheumatism in a patient suffering from typhoid fever. Others have expressed the opinion that it is caused by profuse sweating; but Dr. Lemaigre thinks that it is produced by the same virus as the typhoid fever itself.

J. S. KAESER, M.D.

3217. *Ziehl on the Pneumococcus in Sputa.*—Ziehl (*Centralbl. für die Med. Wiss.*, 1884, No. 7) in opposition to Friedländer, maintains that the pneumococcus in sputa is diagnostic of pneumonia. No doubt, when pneumonia supervenes on an old standing bronchitis, the research is difficult, but this difficulty is not peculiar to this condition. The capsule discovered by Günther is characteristic of the pneumo-

coccus, and may always be seen. He recommends that the sputa should be received in a dry vessel, not spat into water, that the dried film should be stained with a watery solution of gentian violet and examined in a drop of water. Encapsuled micrococci are to be seen in phthisical and bronchitic sputa, but in these cases the capsule is very narrow. A broad capsule is diagnostic of the pneumococcus.

Robert Saundby, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

3218. Brugnoli.—On the Therapeutic Use of Nux Vomica in the Neuroses of Organic Life. (*Memorie dell' Accad. delle Scienze dell' Istituto di Bologna.*)

3219. Bozzolo.—Thymol in the Treatment of Cholera. (*Gazz. Med. Ital. Prov. Venete*, July 19, 1884.)

3220. Testa.—On the Therapeutic Action of Bromide of Zinc compared with that of Bromide of Potassium and Zinc. (*Riv. Clinica e Terapeutica*, July 1884.)

3221. Barduzzi.—On the action of Chloral in Albuminuria. (*Commentario Clinico delle Malattie degli Organi Genito-urinari*, March and April 1884.)

3222. Baletye.—The Action of Salicylate of Soda on the Uterus. (*Thèse de Paris.*)

3223. Paszkewicz.—On Koumiss and Kephyr in Surgical Diseases. (*Vratch*, No. 4, 1883, p. 60.)

3224. Pohl, H.—On Migraine Stifte. (*Russkaia Meditzina*, No. 13, 1884, p. 309.)

3225. Ignatieff, V. E.—On the Therapeutic Value of Burnt Alum in Intermittent Fever. (*Meditz. Obozr.*, Fasc. x., 1884, pp, 1030–4.)

3226. Petroff.—On Burnt Alum in Intermittent Fever. (*Vratch*, No. 24, 1884, p. 402.)

3227. Koltchevsky, K. D.—Alum as a Substitute for Quinine in the Treatment of Intermittent Fevers. (*Vratch*, No. 25, 1884, pp. 415–6.)

3228. Zasetzky, Professor N. A.—A Note on Antipyrin. (*Vratch*, 1884, No. 25, pp. 411–2.)

3229. Jacubovitch, V. F.—Clinical Observations on the Action of Urea in Various Febrile Diseases in Children. (*Russkaia Meditzina*, 1884, No. 15, pp. 339–41 ; No. 16, pp. 359–60 ; and No. 17, pp. 379–80.)

3230. Verujsky.—On the Therapeutic Action of Kairin in Febrile Patients. (*Russkaia Meditzina*, 1884, No. 21, pp. 472–3.)

3231. Tommasi-Crudeli.—Preservation against Malaria. (*Gazz. degli Ospitali*, July 20, 1884.)

3232. Bergesio and Musso.—Contribution to the Study of the Cerebral Circulation. (*Archiv. Ital. per le Malattie Nervose*, Fasc. iii. and iv., 1884.)

3233. Roden.—The Saline Waters of Droitwich. (*Brit. Med. Jour.*, August, p. 273.)

3234. Haig.—The Influence of Diet on Headache. (*Practitioner*, August, p. 113.)

3235. Eager.—A Case of Diabetes treated by Pilocarpine. (*Lancet*, August, p. 215.)

3236. Dixon.—The Internal Use of Nitrite of Amyl. (*Brit. Med. Jour.*, July, p. 147.)

3237. Boggs.—The Bromides. (*Lancet*, July, p. 47.)

3238. Seaman.—On Cholera. (*Lancet*, July, p. 126.)

3239. Richardson.—Condensation of Water on the Bronchial Surface during Narcotism and in Disease. (*Asclepiad*, July, p. 253.)

3240. Richardson.—A Sea Atmosphere for the Sick Room. (*Asclepiad*, July, p. 259.)

3241. Parmenter.—The Local Application of Ether in Neuralgia of the Bladder. (*New York Med. Record*, July.)

3242. Taylor.—Prevention of Harvest-bumps. (*Lancet*, August, p. 306.)

3243. Shoemaker.—Jequirity. (*Lancet*, August, p. 185.)

3244. Plevani.—Absorbent Tow. (*Lancet*, June, p. 1042.)

3245. Granville. — Hay-fever and Hay-asthma. (*Brit. Med. Jour.*, June, p. 1278.)

3246. Debove.—The Treatment of Gastric Ulcer. (*Brit. Med. Jour.*, July, p. 2.)

3247. Perez.—The Action of Boracic Acid on the Urine. (*Lancet*, July, p. 133.)

3248. Damourette.—The Treatment of Cholera. (*Revue de Thérap. Méd.-Chir.*, 1884, No. 15.)

3249. Dujardin-Beaumetz.—Cola-nut. (*Revue de Thérap. Méd.-Chir.*, 1884, No. 15.)

3250. Labbé.—Hydrate of Therpylene. (*Revue de Thérap. Méd.-Chir.*, 1884, No. 15.)

3251. Debove.—The Treatment of Sciatica by the Local Application of Intense Cold. (*Journ. des Connaiss. Méd.*, Aug. 21.)

3252. Jaillet.—The Antagonism between Alcohol and Strychnia. (*Lyon Médical*, No. 31, 1884.)

3253. Miquel.—Antiseptic Substances. (*Annuaire Météorol. de Montsouris.*)

Art. 3218. *Brugnoli on the Therapeutic Use of Nux Vomica in the Neuroses of Organic Life.*—The author (*Memorie dell' Accad. delle Scienze dell' Istituto di Bologna*) has obtained much advantage from nux vomica in some cases of phthisis, and thinks the disease may even be sometimes arrested by it. He believes that nux vomica corrects the abnormal and altered function of the pneumogastric and great sympathetic nerves. The relations which these nerves have in the thoracic cavity with the lungs, pleura, and bronchi, and with the peribronchial glands, make it likely that they often participate in the diseases and alterations of neighbouring parts ; and *post mortem* examinations show frequently that in phthisis the pneumogastrics are compressed or stretched, especially by bronchial adenopathies. The author for these reasons insists on the proclivity of these nerves to functional alteration, and holds that a therapeutic agent like nux vomica may exert a calming sedative action regulating the altered innervation. Also in the remittent, or rather the intermittent, fever, which sometimes accompanies the symptoms of a slow phthisogenic process in the lung, nux vomica is proved to be effectual in overcoming the fever. The author, holding that the nervous system has a great share in the pathogenesis of the fever, is inclined to believe that the attacks of fever may be caused solely by an altered innervation of the nerves of organic life, and especially of some ganglion of the great sympathetic. Brugnoli also points out the use of nux vomica in typhoid fever. In some cases, in which the typhoid process is exhausted, and all symptoms of the disease have nearly disappeared, the appetite may have returned, and nutrition even may have begun to improve, but evening fever remains, not, however, causing the prostration and weakness of ordinary evening fevers ; but it resists large doses of quinine, and only disappears gradually. In such cases, the author has seen the most striking benefit from the administration of nux vomica, the fever ceasing in one or two days. Lastly, confirming the good effects of nux vomica in the treatment of albuminuria and diabetes, the author insists that nux vomica exerts a marked action on the nerves of organic life, regulating their function and displaying

a sedative action on them, its action being different or even opposite on the innervation of animal life.

3219. *Bozzolo on Thymol in the Treatment of Cholera.*—Professor Bozzolo, Director of the Medical Clinic of Turin, publishes the following letter in the Italian papers. 'If it is true, as we have reason to believe from the studies of Pacini and many others, and especially from those of the illustrious Koch, that cholera is due to special microbes (the comma-bacilli of Koch), which penetrate into the intestinal tube, giving rise to grave phenomena; if it is true that these bacilli are developed in immense numbers in the intestine because of the alkalinity of its contents, which is favourable to their development (Koch); if it is true that acids are opposed to their development, kill them, or at least render them motionless (Koch); a substance at once suggests itself for the treatment of cholera, when the individual is infested by these inauspicious guests, and when vomiting has not yet appeared; that is to say, during the period of premonitory diarrhœa. This substance is thymol. The same theoretical considerations which induced me to use thymol in the treatment of ankylostomo-anæmia and of tænia, in which diseases it has exceeded my expectations, producing a rapid and complete cure; these same considerations, strengthened by some circumstances of much value for its application to combat the comma-bacillus of Koch (acidity), induce me to publish the proposal to try it in the treatment of cholera. Such a proposal, in the case of any other less terrible disease, I should have carefully kept to myself, at least until I had been able to test its effect; but under the circumstances, at the risk of being accused of over-haste, I think it my bounden duty to put the suggestion before the medical public, even by the aid of political papers; and this the more as its trial, whatever good may possibly result from it, at least can do no harm. It is desired to introduce into the intestine a substance strongly antiseptic (antiparasitic), acid, not very soluble, and which may be introduced in great quantity without danger, without altering the functions of the stomach and intestines, and which cannot be, or but slightly, absorbed or altered in the stomach. Thymol or thymic acid possesses all these properties. I, Professors Fiori and Graziadei, my former assistants, and my present assistants, have often seen, after the administration of thymol for other purposes, so called gastric and intestinal catarrhs improve and diarrhœa cease, probably from the antifermentative property of the thymol. Thymic acid may be administered without the least danger, without even any inconvenience, in doses of twelve grammes a day, in wafers or capsules, each containing one or two grammes of the remedy. Care must be taken not to administer it in solution (it is very little soluble in water, soluble in alcohol and glycerine). I have seen this mode of administration recommended, to my great surprise, in some books. In this manner, it causes in the mouth and throat an insupportable sense of burning, without, however, producing any lesion of the tissues. Medical men who desire further particulars can find them in the *Gazz. degli Ospitali* of the year 1882 (Bozzolo, *Virtù nuova di un rimedio nuovo*); in the *Gazz. delle Cliniche* of Turin (Silva, *Azione antipiretica del timolo*); and in the *Giornale della Reale Accademia di Medicina* of Turin (Graziadei, *Cura della anchilostomo-anæmia col timolo*), also of the year 1882. I request the journals to report my proposal, which I shall hasten to present to the Reale Accademia di Medicina in their next sitting.'

3220. *Testa on the Therapeutic Action of Bromide of Zinc compared with that of Bromide of Potassium and Zinc.*—The author's experiments show that bromide of zinc diminishes the electric excitability of the brain. But does the absence of effects to electrical stimulation depend on diminished excitability of the medulla or of the psycho-motor centres? The author thinks that this question may be solved by administering, during the use of bromide of zinc and of potassium, which, according to Albertoni, produces the same effects, a substance which, while it exerts no action on the brain, increases the excito-motor power of the medulla oblongata. Strychnin has such an influence; while it exalts the excitability of the medulla, it has no influence on the brain. In this way, the author finds that bromide of potassium and bromide of zinc diminish or abolish the excitability of the psycho-motor centres. Bromide of zinc and bromide of potassium are then likely to be of great utility in the treatment of epilepsy of cerebral origin. The author then seeks to determine whether bromide of zinc owes to bromine only, or in any part to the zinc, its anti-epileptic virtues. From experiments on dogs, he comes to the conclusion that both the bromine and the zinc help to diminish the cerebral excitability, but the bromine chiefly. He then goes on to study its action in epilepsy of spinal origin, first noticing the many controversies as to the existence or non-existence of the spinal origin of epilepsy, and quoting, on the one side, Luciani's opinion, who admits that the motor zone of the cerebral cortex represents the central organ of epileptic convulsions, and that the morbid excitement of the medulla oblongata is probably the accessory moment, complementary and not necessary, of the process itself, and on the other side the opinion of Chirone, who holds that epilepsy may be of cerebral or of spinal origin. This theory is founded on the study of the mechanism of the action of cinchonidin and of picrotoxin. Cinchonidin produces epileptic paroxysms in healthy pigeons, and has no effect in pigeons after the brain is removed; on the contrary, picrotoxin causes epileptic convulsions in both; the convulsions being stronger on the side of the body opposed to that in which a cerebral lobe has been extirpated. The author agrees with Chirone, not only as to the results obtained with picrotoxin, but also because he finds that santonin is capable of causing epileptic convulsions not depending on the psycho-motor centres. Another series of experiments was undertaken to show if and how much bromide of zinc was antagonistic to the action of cinchonidin. From these it results that bromide of potassium, bromide of zinc, and zinc diminish more or less greatly, and in decreasing order from the first to the third, the action of cinchonidin; but that neither abolishes it altogether. As to the antagonism between the action of bromide of potassium, bromide of zinc, and zinc, and that of picrotoxin, he finds that all these in the same order are opposed much more to the action of cinchonidin than to that of picrotoxin. If picrotoxin be given in doses sufficiently large to cause complete epileptic attacks, neither bromide of potassium, bromide of zinc, or zinc is able to arrest the convulsion; but if picrotoxin be given in doses sufficient only to cause partial convulsive movements, or at most general tremors, then all three substances may diminish the intensity of the symptoms, or even totally arrest them. All

three substances are therefore useful in epilepsy of spinal origin, since they diminish the excito-reflex activity of the bulbo-spinal axis; and, admitting with Luciani that the medulla has only an accessory part in the mechanism of epilepsy, their action may be explained even better with the double mechanism; diminishing, that is, not only the activity of the medulla but also directly the excitability of the cerebral cortex, which (according to Luciani) is the necessary central organ and the seat of the morbid excitement, direct or indirect, of the epileptic process. By its action on the medulla, and not less by its action on the sensibility, and hence on the blood-vessels, is explained the efficacy of bromide of zinc in other convulsive disorders, and especially in hystero-epilepsy. In this last affection, the author holds it to be superior to bromide of potassium, as it has no depressant action on the organism; and to zinc, as its action is more marked and less uncertain.

3221. *Barduzzi on the Action of Chloral in Albuminuria.*—Barduzzi, in 1878, noticed the good effect of chloral in albuminuria, recently confirmed by Dr. Wilson (*Brit. Med. Jour.*, May 1884). A lady, suffering from insomnia in the last months of pregnancy, with dyspnœa, from general œdema of the legs and hands, and with highly albuminous urine, was ordered 2 grammes of chloral to be taken in two doses every evening. This treatment was continued for about twenty days with very good effects; sound restorative sleep was not only obtained, but the œdema disappeared, and the quantity of albumen in the urine was notably diminished. Labour followed in due course, and was in every respect normal, and the puerperium was free from any complication. Since this case in 1878, Barduzzi has always prescribed chloral in the last month of pregnancy, when there is much œdema, and the urine is scanty and albuminous, as a prophylactic against eclampsia. In a man, 45 years of age, affected by simple nephritis, chloral in doses of 3 grammes a day procured great relief in a short time, and the albumen almost entirely disappeared from the urine. In the so-called physiological albuminuria, chloral is also useful, as the author shows by the case of a man in whose urine albumen was almost constantly present. Barduzzi points out the need of more exact studies of the action of chloral on the renal tissue.

3222. *Baletye on the Action of Salicylate of Soda on the Uterus.*—Salicylate of soda, in ordinary therapeutic doses, allays the pain of dysmenorrhœa, probably from its sedative action on the central nervous system. It seems to increase the menstrual flow, and in some cases causes its reappearance when suppressed. In four observations reported by the author, the administration of salicylate of soda in large doses was followed by abortion. In five other observations, the treatment with salicylate in smaller doses was not followed by any result. In small doses, therefore, it seems to have no abortifacient action. In experiments on animals, the salicylate had no expulsive action. The salicylate must be prescribed with care in pregnancy, since some women are disposed to abort; and, though small doses seem safe, large doses may be certainly followed by abortion, and the degree of tolerance of the drug may vary in different individuals.

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3223. *Paszkewicz on Koumiss and Kephyr in Surgical Diseases.*—Dr. Paszkewicz, of Piatigorsk, writes (*Vratch*, No. 4, 1883) that during these eleven years he, with best results, gave koumiss to patients suffering from torpid ulcers, ulcerated fistulæ, periostitis, inflammation of lymphatic glands, &c. Equally successful were the results obtained by him from the use of kephyr, a substitute for koumiss, prepared through fermentation of cows' milk by means of yeast of a peculiar kind (namely, consisting of Meyen's *saccharomyces cerevisiæ* and Kern's *Dispora Caucasica*).

3224. *Pohl on Migraine Rods.*—In the *Russkaia Meditzina*, No. 13, 1884, p. 309, Dr. H. Pohl draws attention to so-called 'migraine stifte,' or thick conoid rods made of menthol and eucalyptol, or menthol and thymol. They are now extensively used in Germany, and especially in Russia, as a remedy for nervous headache and toothache; in the former case the frontal and temporal regions, and in the latter the cheeks, are rubbed with a migraine rod. The author recommends, also, rubbing the whole face with it as a means against gnats, flies, &c., in summer-time.

3225. *Ignatieff on Burnt Alum in Intermittent Fever.*—In the *Meditz. Obozr.*, Fasc. x., 1884, p. 1030, Dr. V. E. Ignatieff, of Moscow, records fourteen cases of intermittent fever treated by burnt alum after the plan mentioned in the London Medical Record, 1884 (April, p. 162, May, p. 209, and July, p. 296). He summarises his results as follows. 1. Burnt alum is not a reliable substitute for quinine. Its effects are inconstant even in slightly malarial regions (as in the Moscow Government, for instance). It gives good results in some fresh cases of quotidian type. 2. It has no influence on the spleen, which remains enlarged after alum treatment. 3. It is necessary to continue the administration of alum for about two days after the disappearance of paroxysms. 4. All unpleasant additional effects of alum (as pain in the epigastrium, or diarrhœa) may be prevented by simultaneously giving a sufficient quantity of water (that is, about half or three-fourths of a glass).

3226. *Petroff on Burnt Alum in Intermittent Fever.*—Dr. Petroff, of Tambov, obtained (*Vratch*, 1884, No. 24) good results in five cases of intermittent fever treated by alum. In one of the cases, that of a girl, aged 15, who could not tolerate quinine, and had been unsuccessfully treated with Fowler's solution, the paroxysms (of tertian type) disappeared after first two five-grain doses of alum. In another case, of a patient, aged 12, with two months' intermittent, the fever yielded to the drug as rapidly, after quinine treatment had failed. Similar favourable results were lately reported by Dr. Tzitrin.

3227. *Koltchevsky on Alum in Intermittent Fever.*—In the *Vratch*, No. 25, 1884, p. 415, Dr. K. D. Koltchevsky, of Zaslav, Volyn Government (a strongly malarial district), describes twenty recent cases of intermittent fever, fifteen of which were of quotidian type, and five of tertian. All the cases were subjected to alum treatment. The latter proved successful only in two cases; in the remaining eighteen alum gave negative results, the fever rapidly disappearing under quinine. In none of the cases was any change in the size of the spleen produced by alum.

3228. *Zasetzky on Antipyrin.*—Professor N. A. Zasetzky studied the action of antipyrin (a new antifebrile remedy proposed by Professor Filehne in the *Zeitschr. für Klin. Med.*, Band vii.) in three patients at Professor V. A. Manassein's clinic. The

patients, two of whom suffered from enteric fever, and a third from scurvy, received five grains of antipyrin in three doses (at first two grammes, then, an hour afterwards, other two grammes, and one gramme again in an hour). The results are summed up by the author as follows. 1. Antipyrin is a powerful antipyretic agent; a high febrile temperature (as 41°C. in the rectum) may be lowered by it to the normal level. 2. In an hour after the first two-gramme dose the temperature falls 0°·4 to 1°·1 C., the decrease reaching its maximal degree by the end of four or five hours after the first dose; then a gradual rise follows, a relatively low temperature (37°·5, or 38°·2 C. in the rectum) lasting from 3 to 7 hours. 3. Antipyrin is a strong sudorific. Within two or three hours (or even earlier) after the first dose, a profuse perspiration ensues, the frequent degree of which coincides with the greatest fall of the temperature of the body. The sudorific power of antipyrin resembles that of pilocarpine. 4. The pulse shows retardation within an hour after the first dose; sometimes the retardation is preceded by a slight increase in frequency. The retardation is not accompanied by any weakness of the pulse; in some cases, there is observed even an increase in the strength of the pulse. The maximum retardation of the pulse coincides with the greatest fall of the temperature. With re-elevation of the latter, the pulse becomes more frequent. 5. The temperature of the surface of the body seems to be lowered parallel with the internal temperature. 6. No disagreeable additional effects (except vomiting after a dose in one of the patients) were noted.

3229. *Jacubovitch on the Therapeutic Action of Urea in Febrile Diseases in Children.*—In the *Russkaia Meditzina*, 1884, Nos. 15, 16, and 17, Dr. V. F. Jacubovitch details his observations on the action of urea, which were carried on by him in Professor N. I. Bystroff's pediatric clinic in St. Petersburg. The observations were undertaken partly to verify the results published by Dr. Belousoff (*see* the LONDON MEDICAL RECORD, Aug. 1883, p. 322), partly to elucidate the influence produced by the use of urea on daily quantity of the urine and its ingredients. Urea was given in daily doses from 0·5 gramme to 10 grammes. The author came to the following conclusions. 1. Urea cannot possibly be regarded as an antipyretic remedy. 2. When introduced into a child's stomach, it does not undergo transformation into carbonate of ammonia, but is eliminated through the kidneys in the course of twenty-four hours. 3. The administration of urea to children brings about a diminution in the daily quantity of uric acid excreted in the urine. 4. It is easily borne in daily doses amounting to ten grammes, even by little children (*e.g.* aged 3). 5. It produces a considerable increase in the secretion of urine. 6. It may be recommended as an excellent and safe diuretic in pediatric practice, especially in diseases with a normal temperature, and with a suppression of the action of the kidneys, as, for instance, in some forms of nephritis, in cases of disturbed compensation in cardiac disease, &c. [In the *Vratch*, 1882, No. 46, pp. 778-80, Dr. S. A. Lebedeff describes his experiments in Professor V. V. Pashutin's laboratory on the action of urea in dogs with putrid fever (artificially produced). To judge from these experiments, urea has no antipyretic action whatever. On the other hand, an article in the LONDON MEDICAL RECORD, Dec. 1883, p. 505, seems to support Dr. Belousoff's statements as regards the therapeutic value of urea in malarial fevers.—*Rep.*]

3230. *Verujsky on Kairin in Febrile Diseases.*—Dr. Verujsky studied (*Russkaia Meditzina*, 1884, No. 21) the action of kairin in 38 patients suffering from enteric, relapsing, and malarial fevers, acute and chronic catarrhal pneumonia, croupous pneumonia, pericarditis, pleuritis, coxitis, &c. Kairin was given in doses varying from 5 to 20 grains, from 8 grains to 4 grammes being used daily. The best results were obtained in cases of exudative pleuritis, where, side by side with a considerable diminution of fever, there was observed a rapid resorption of effusion. In croupous pneumonia, small doses had but a slight antipyretic effect; the larger (from 2·5 to 4·0 grammes daily) lowered the temperature 2° C., but there was a tendency to collapse. The same may be said in regard to enteric fever, in which large doses lowered the temperature by 1°·6 to 3° C. In intermittent fever, kairin, when administered before an expected paroxysm, did not prevent the latter; when administered during an attack, it was able only to retard an increase of temperature, the latter always reaching its usual height. Kairin could shorten an attack only when given in the period of acme. In phthisis, the temperature fell from 1°·2 to 3°·1 C.; but the administration of kairin in these cases cannot be recommended, since the danger of collapse is great, while the action of kairin is only very temporary. In non-febrile patients, kairin, in doses of 40 or 50 grains in four or five hours, lowered the temperature from 1° to 1°·2 C. A high stabile temperature always fell for a shorter period than a less high and less stabile. About one hour after the administration of kairin the temperature began to rise, and in two or three hours it reached its former level or went up still higher. Only 25 per cent. of the cases did not present re-elevation, but in all of them there was observed diarrhœa. The exacerbation of fever usually lasted one or two hours, and was followed by a more durable (24 hours') decrease of the temperature.

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3231. *Tommasi-Crudeli on the Prevention of Malarial Infection.*—In his second report to the Minister of Agriculture, Professor Tommasi-Crudeli recommends arsenic taken habitually as a preservative against malaria. Decoction of lemon and an aliment named *trefusia* (?) he also advises to be tried on a large scale by way of experiment.

3232. *Bergesio and Musso on the Action of Hypnotics on the Cerebral Circulation.*—Drs. B. Bergesio and G. Musso, having a patient who had lost a portion of the calvarium, were enabled to make observations on the circulation in the brain. They confirmed the view that the brain is anæmic during sleep. Paraldehyde gave the same result as natural sleep. Morphia and alcohol caused endocranial congestion. The authors remark that the hypnotic effects of these drugs do not depend upon the changes they cause in the blood-pressure, but upon some more intimate modification, perhaps of a chemical nature, of the cells of the cerebral cortex.

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3233. *Roden on the Saline Waters of Droitwitch.*—A paper by Dr. S. Roden on the physiological and curative influence of the saline waters of Droitwich in certain forms of disease, is reported in the *Brit. Med. Jour.*, Aug. 1884, p. 273. The brine is administered as baths; its internal use has not been adopted. In cases of gouty or rheumatic

pains, the effect of the first two or three baths is to aggravate rather than to subdue, except during immersion. True neuralgic pains, on the other hand, are usually subdued at once. The primary, and possibly the chief physiological action of the hot brine upon the human frame, is the powerful stimulation of the capillary circulation, first on the surface, but finally and speedily throughout the entire system. The ailments in which the benefit is most marked from the use of these baths are :—1. acute and subacute rheumatic gout ; 2, gout and rheumatism, after they have passed the true acute stage ; 3, acute and subacute sciatica, and lumbago ; 4, neuralgia ; 5. chorea ; 6, amenorrhœa ; 7, the cachectic debility of the young, spinal irritation ; 8, rachitis in its earlier stages ; also stiffened joints, loss of power over the limbs, from rheumatic or gouty thickening of the fibrous aponeuroses, and envelopes of the muscles and nerves. The general effect of the bath is tonic, and not debilitating. (Vide *Brit. Med. Jour.*, Nov. 1882, p. 990.)

3234. *Haig on the Influence of Diet on Headache.*—Dr. Alex. Haig, in the *Practitioner*, Aug. 1884, p. 113, narrates the case of a young professional man, aged about 30, who suffered from headache as long as he could remember. He was hypermetropic and astigmatic with the right eye, but these defects had been remedied by glasses for many years. The history of an attack generally was : a feeling of being less fresh than usual on awaking, even the cold bath not bringing him up to the mark ; a sensation of emptiness after meals, and even in the summer cold hands and feet. Towards the afternoon came on a throbbing headache, generally occipital ; when at its worst, it was right in the centre of the occiput, distinctly throbbing, and greatly increased by exertion or stooping down ; on lying down first in bed, the pain became almost unbearable, and if sleep were at length possible, he might wake free from pain, or there might still be slight pain, which increased as the day wore on. The treatment adopted by Dr. Haig was a strict vegetarian diet, with the result that instead of having two or three attacks a week, the patient had only three in six months. After that, it was found that a less strict diet gave practical immunity. The only thing absolutely avoided was butchers' meat, one meal of which was sufficient to bring on an attack. Two or three tumblers of hot water taken every night at bed-time gave increased immunity, and enabled the patient to take a little butchers' meat occasionally without fear of an attack. Speaking of the cause of the headache, the author puts it down to the impurity of the blood, which is itself due to imperfection of digestive processes. As to the nature of the impurity, and its connection with the digestion of meat, the following passage is quoted from Dr. M. Foster's *Physiology* :—'Possibly also in the intestines, as in the laboratory, this pancreatic digestion of proteids in excess is accompanied by a considerable development of bacteria and other organised bodies ; which create trouble by inducing fermentative changes in the accompanying saccharine constituents of the chyme.'

3235. *Eager on a Case of Diabetes Treated by Pilocarpine.*—Mr. Eager, in the *Lancet*, August 1884, p. 275, reports the case of a man, aged 43, who, during the latter six months of 1881, lost flesh considerably. In November 1881, he suffered from an abscess in the right hand, which was followed by boils over the body generally. In January 1882, he complained of great thirst and frequent micturition. On examining the urine, the specific gravity was found to be 1040, with an abundance of sugar, whilst the quantity was sixteen pints daily. The patient was placed on a diet of meat, gluten bread, eggs, &c., and ordered one-twentieth of a grain of hydrochlorate of pilocarpine and one grain of sulphate of potash, to be placed dry on the tongue three times a day, with five grains of pepsina porci, and twenty minims of dilute hydrochloric acid in water, also three times a day. Under this treatment the patient rapidly improved. The pilocarpine powders were taken regularly for six months, and the pepsine mixture for nine months. In July 1883, the gluten bread was discontinued ; in March 1884, the patient passed urine normal in quantity and quality, and was strong and well. [The value of pilocarpine was noted in the London Medical Record, 1880, p. 484, vide *Medical Digest*, sect. 3405 ; and since then in the *Practitioner*, April 1882, p. 250, and in the London Medical Record, 1884, p. 212, further notices have appeared, so that the value of the drug in certain cases appears to be confirmed.—*Rep.*]

3236. *Dixon on the Internal Use of Nitrite of Amyl.*—Mr. J. F. Dixon, in the *Brit. Med. Jour.*, July 1884, p. 147, writes that he believes that, in nitrite of amyl given internally, we have a drug which meets all the requirements of cases in which it is important to lower the arterial tension. The author employed it in cases of anginous attacks of a very severe character. One was complicated with very loud mitral systolic murmur and nightly angina, another with an aortic systolic murmur, and a third with irritable action, but no apparent organic lesion. The dose employed was 2½ minims three times a day, until the action of the drug was established, when a dose each night was sufficient. [In the *Asclepiad* for April, p. 165, Dr. B. W. Richardson speaks highly of the value of nitrite of amyl given internally ; *vide* London Medical Record, p. 294.—*Rep.*]

3237. *Boggs on the Bromides.*—Dr. Boggs, in the *Lancet*, July 1884, p. 47, contributes a letter on the use of bromides in headache, founded on personal experience. The author suffered for two years from headache and noises in the ears, and put himself under a course of bromide of potassium, but, finding no relief, he consulted Dr. Oscar Jennings, who prescribed the following mixture. Potassii bromidi, ʒiv. ; sodii bromidi, ʒij. ; ammonii bromidi, ʒij. ; aquæ, ℥xij. ; half an ounce to be taken every two, three, or four hours, according to the urgency of the symptoms. After a week's trial there was considerable relief ; but, as there was some weakness of the heart's action, five minims of tincture of digitalis was ordered every four hours. In another week, the headache was completely cured. A course of chloride of gold and sodium was next resorted to, which entirely set up the patient. An acnoid eruption over the body was promptly cured by taking five minims of Fowler's solution, morning and evening. The briny flavour of the bromides is well disguised by making them up with syrup of gooseberries.

3238. *Seaman on Cholera.*—Dr. Seaman, in the *Lancet*, July 1884, p. 126, writes that in 1865 he had great success from treating cholera by means of calomel, followed immediately by cold affusion. He usually began with ten grains of calomel, and if there was much vomiting, five grains more were

given. The patient, even if in a state of great collapse, was then stripped of all clothing, carried in the horizontal position to the bath-room, where he was laid on a bedstead without any bedding. Three or four large earthenware 'chatties' of cold water were then dashed over him. He was rubbed dry with towels as rapidly as possible, and replaced in his bed. In about five minutes the bath was repeated as before, after which, even in the worst cases, the pulse could now generally be felt; the skin became warmer, and with reaction, vomiting and purging gradually ceased. The cold affusion was used at least five or six times in each case, at intervals varying according to circumstances. The patient required watching for many days. They found great relief during the cramps if the limbs were well rubbed. [During several severe epidemics in Java, the reporter found vast benefit, in relieving cramp in collapse, from the use of ice freely rubbed down the spine and over the limbs affected. The relief in many cases was simply magical.—*Rep.*]

3239. *Richardson on the Condensation of Water on the Bronchial Surface during Narcotism and in Disease.*—Dr. Richardson, in the *Asclepiad*, July 1884, p. 253, remarks that when the atmosphere is extremely dry the action of a narcotic vapour is greatly increased, and recovery from its effects is comparatively easy. When the air is saturated with watery vapour the action is impeded, while recovery is prolonged. When the body of an animal becomes profoundly narcotised, and the insensibility is long maintained during conditions in which the air is cold and moist, there occurs, not unfrequently, an actual condensation of water in the minute bronchial passages, which condensation leads to asphyxia, and if it be continued, to actual death. It is important to remember this, in the treatment of cases of poisoning during which the animal heat is reduced. It will often turn the scale in such instances, in favour of return of life, simply to place the body in a warm and dry air. Dr. Richardson enters a protest against the moist air-bath in many bronchial affections.

3240. *Richardson on a Sea Atmosphere for the Sick Room.*—Dr. B. W. Richardson, in the *Asclepiad*, July 1884, p. 259, refers to a paper by himself in the *Brit. Med. Jour.*, Aug. 19, 1865, 'On a Sea-spray for the Sick Room.' The solution to be used and diffused as spray consisted of peroxide of hydrogen (ten volumes strength), containing 1 per cent. of ozonic ether, iodine to saturation, and 2·50 per cent. of sea-salt. The solution, placed in a steam or hand-spray diffuser, can be distributed in the finest spray in the sick room at the rate of two fluid ounces in a quarter of an hour. It communicates a pleasant sea odour, and is the best purifier of the air. It is also a powerful disinfectant. Mr. Carl R. Schomberg has recently invented a large spray-producer, which will diffuse the artificial sea air through a hospital ward.

3241. *Parmenter on the Local Application of Ether in Neuralgia of the Bladder.*—Dr. Parmenter, in the *New York Med. Record*, July 5, 1884, states that, in two cases of severe neuralgia of the bladder, he injected into the viscus ten drops of ether in two drachms of water. In each case, within one minute, the ether was perceptible in the breath; and within five minutes, there was perfect relief from pain, which previously had been most severe, and had not yielded to the various remedies previously employed.

3242. *Taylor on the Prevention of Harvest-bumps.*—In the *Lancet*, August 1884, p. 306, Dr. Taylor writes that hygienic treatment is an important factor in preventing attacks of 'harvest-bumps.' The clothes of children so affected should be baked or steamed at a temperature not lower than 150° F. For external application, the following lotion is advised: acidi carbolici, ʒij.; spir. rorismarini, ʒj.; spir. vini rectificati, ʒss.; aquam ad ℥ij. With this the parts are to be sponged night and morning. The quickest way to destroy the parasite is to immerse the patient, leaving his head free, in a gaseous bath of sulphurous acid, made by burning twelve drachms of sulphur in a suitable apparatus. Whilst the patient is in the bath, his clothes should be baked. [Washing well with quassia tea is a valuable preventive.—*Rep.*]

3243. *Shoemaker on Jequirity.*—Dr. John Shoemaker, in the *Lancet*, Aug. 1884, p. 185, contributes an able article on 'Jequirity (Linnæ): and its Use in Disease of the Skin.' Cases are cited, showing the results met with in the treatment of ulcers, lupus, &c. The author sums up by pronouncing jequirity a most powerful agent, applicable to most cases of unhealthy ulcerating and granulating conditions. It exercises a destructive tendency, followed by a constructive change, which leads to a rapid development of healthy tissue. The remedy should be applied with caution, as it may give rise to alarming symptoms, such as erysipelatous inflammation, and in weak and irritable patients to great constitutional disturbance. These symptoms, however, will speedily subside with proper attention and on the drying of the crusts. To prepare a proper solution of the beans, the following directions are given. 'Two hundred grains are decorticated by being slightly bruised and cracked in a mortar, the red hulls are carefully picked from the cotyledons, and, in a bottle, covered with distilled water. They are thus macerated for twenty-four hours, when they are again transferred to a mortar and reduced to a smooth paste, and then sufficient water is added to make the whole weigh 800 grains.' The emulsion is then applied to the ulcers, &c., by a camel's hair brush. Several strikingly successful cases of lupus, scrofulous, indolent ulcers, venereal and epithelial ulcers, are recorded, illustrating the great value of the drug in such cases.

3244. *Plevani on Absorbent Tow.*—In the *Lancet*, June 1884, p. 1042, attention is drawn to a paper recently published by Signor Silvio Plevani, in the *Gazzetta degli Ospitali*, on 'The Economic Preparation of some Antiseptic Dressings.' It is stated that tow can be used for all surgical purposes instead of absorbent cotton, when prepared according to the following directions. Boil the tow for some time in lye made with wood-ashes, or with a 10 per cent. solution of carbonate of soda: then wash it repeatedly in water. The tow, thus deprived of grease, is immersed in a 10 per cent. solution of chloride of lime, and kept in it for some hours, with occasional stirring, until it has become perfectly white. It is then washed thoroughly in pure water until the liquid squeezed from it is perfectly limpid; drying and carding complete the process.

3245. *Granville on Hay-fever and Hay-asthma.* Dr. Mortimer Granville, in the *Brit. Med. Jour.*, June 1884, p. 1278, recommends the following for hay-fever. ℞ Boracis pulv., gr. xx.; capsici pulv., gr. xv.; ammon. carbon., gr. x.; misce, fiat pulvis. The powder must be very carefully prepared; the

point being that the capsicum must rise with the ammonia. If the ammonia only be taken into the nasal passage, and into the fauces and larynx, no sort of good can be done. The test is, that after the use of the snuff there comes on rapidly a peculiar 'tingling' in the parts, which differs totally from the sensation produced by inhalation of ammonia-vapour. The author insists on the careful preparation of the prescription, and suggests that those who wish to try it should have it made up by such chemists as Squire, Bell, &c. If cayenne pepper be used instead of powdered capsicum, the powder is useless.

3246. *Debove on the Treatment of Gastric Ulcer.*—A note in the *Brit. Med. Jour.*, July 1884, p. 2, draws attention to the views of Dr. Debove on the treatment of gastric ulcer. He does not approve of the milk-diet, as it may cause dilatation of the stomach, in consequence of the large quantity of fluid which the patient is obliged to drink. Dr. Debove prescribes three meals a day, consisting each of 25 grammes of meat-powder mixed with 1 gramme of burnt magnesia, 2 grammes of prepared chalk, and 1 gramme of saccharated lime. A quarter of an hour after each meal, the patient is ordered to take 4 grammes of bicarbonate of soda. By this treatment the gastric juice is neutralised, and no peptones are formed in the stomach.

3247. *Perez on the Action of Boracic Acid on the Urine.*—Mr. Perez (*Lancet*, July 1884, p. 133) writes that he has employed boracic acid internally with a view of checking the formation of ammoniacal urine, and has met with great success. Ten-grain doses every three hours, for twenty-four hours, changed the urine of a patient suffering from perineal abscess, &c., from a strongly smelling ammoniacal fluid, to an acid unirritating one. Another case in which it was tried was that of an old woman, who had suffered from cystitis for seven months. Ten grains given twice a day changed the reaction of the urine in twenty-four hours, and greatly improved the general condition of the patient.

Richard Neale, M.D.

3248. *Damourette on the Treatment of Cholera.*—Dr. Martin Damourette states (*Revue de Thérap. Méd.-Chir.*, 1884, No. 15) that he has tried carefully seventy-six of the remedies recommended as most useful in cholera. The best results have been obtained by the following plan of treatment. During the first period, four half-gramme doses of powdered ipecacuanha are given at intervals of half an hour; laudanum and subnitrate of bismuth may also be tried at the onset of the disease, but their action is more uncertain. During the algide stage, give every half hour 1 dessert-spoonful of liquor ammoniæ acetatis in infusion of peppermint, until the patient has taken 60 grammes of the liquor; he must also have, a quarter of an hour after each dose, a small glass of rum. Energetic friction of the limbs is very useful to allay the cramps, and must be persevered in until perspiration is established, or at least until a marked effect has been produced on the temperature of the body.

3249. *Dujardin-Beaumetz on Cola-nut.*—This is the fruit of the Sterculia Acuminata, which grows in the tropical zone of Africa. It is used by the natives as a tonic and aphrodisiac. It contains chiefly caffeine, theobromine, and tannin. According to the author (*Revue de Thérap. Méd.-Chir.*, 1884, No. 15), this drug is useful in chronic diarrhœa and in cardiac valvular disease. It possesses also tonic and stimulating properties. The dose is one dessert-spoonful of the tincture, or one cup of an infusion made with half an ounce of the roasted nuts.

3250. *Labbé on Hydrate of Therpylene.*—This substance, which has been discovered by M. Boursier, can be extracted by distillation from the buds of several sorts of pine. The fluid is saturated with oxygen, and contains a large proportion of ozone. According to the author (*Rev. de Thérap. Médico-Chir.*, No. 15, 1884) it possesses very marked antiseptic and deodorising properties, and can be used for dressing wounds and for painting the throat in diphtheria. The vaporised fluid has a smell of turpentine, and is said to be an efficient agent for the disinfection of rooms.

3251. *Debove on the Treatment of Sciatica by the Local Application of Intense Cold.*—This method of treatment has been tried by the author in a number of severe cases (*Jour. des Connaiss. Méd.*, Aug. 21, 1884), and the results are said to be very satisfactory. M. Debove recommends methyl-chloride as a refrigerating agent, and states that a temperature of —23° C. can be easily obtained by its use. A spray of the fluid is directed to the whole of the painful region, and the skin soon becomes hard and pale. After a short time the tissues are allowed to thaw, and it is then often found that the pain has disappeared. Bullæ sometimes form on the skin as a consequence of the freezing, but they are of no importance, and the operation may be repeated if necessary. Relapses are said to be rare.

3252. *Jaillet on the Antagonism between Alcohol and Strychnia.*—In a recent work reviewed by the *Lyon Médical* (No. 31, 1884), the author states that there is no true antagonism between these two substances, but that strychnia is nevertheless very useful in cases of acute intoxication by alcohol, as it prevents, to a certain extent, the paralysis of the respiratory centre. The dose recommended is one centigramme injected subcutaneously, and followed by injections of a fourth of a centigramme every two or three hours, until there is some exaggeration of the reflex movements. Other measures, such as the application of warmth and the inhalation of oxygen, must not be neglected.

3253. *Miquel on Antiseptic Substances.*—In a paper published in the *Annuaire Météorologique de Montsouris*, the author states that he has made numerous experiments with about one hundred different substances. He finds that the red iodide of mercury is the most active, 25 milligrammes of this salt added to one litre of broth being sufficient to prevent the growth of any microbe. Perchloride of mercury comes fourth in the list, and nitrate of silver occupies the fifth place. According to M. Miquel, sulphurous acid and permanganate of potash do not possess very active properties.

J. S. Kaeser, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

3254. Slaviansky, K. F., Prof.—On Twenty-seven Cases of Laparotomy. (*Russkaia Meditzina*, 1884, No. 6, p. 132, and No. 7, p. 156.)

3255. Tipiakoff, V. V.—On the Use of Electricity in Obstetric Practice. (*Vratch*, 1884, No. 27, p. 394, No. 25, p. 416.)

3256. Ott, Dmitry O.—A Contribution to the Question of the Intraperitoneal Method of Treatment of Pedicle in Myomotomy. (*Vratch*, No. 2, 1884, pp. 17–19.)

3257. Paladini.—Singular Cure of an Ovarian Cyst. (*Gazz. Med. Ital. Lombardia*, Aug. 9, 1884.)

3258. Levi, R.—A Case of Absence of the Uterus. (*Gazz. Med. Ital. Lombardia*, July 5, 1884.)

3259. Apostoli.—The Treatment of Fibro-myomata of the Uterus by Electricity. (*Jour. des Connaiss. Méd.*, No. 31, 1884.)

3260. Macdonald.—Salpingo-oöphorectomy. (*Edin. Med. Jour.*, August, p. 97.)

3261. Cummins.—Non-gravid Hydrorrhœa. (*Brit. Med. Jour.*, July, p. 20.)

3262. Tait.—A Case of Intestines Adherent by the Uterus, causing Intense Pain, relieved by Abdominal Section. (*Med. Times and Gaz.*, July, p. 79.)

3263. Brock. — Obstinate Vomiting of Pregnancy. (*Glasgow Med. Jour.*)

3264. Garrigues. — Improved Cæsarean Section. (*American Jour. of Obstetrics.*)

3265. Murphy.—The Effects of Repair of Lacerations of the Cervix Uteri. (*American Jour. of Obstetrics*, June.)

3266. Emmet.—The Etiology of Perineal Lacerations. (*New York Med. Jour.*)

3267. Mundie.—Non-puerperal Pelvic Lymphadenitis and Lymphangitis. (*American Jour. of Obstetrics*, Oct. 1883.)

Art. 3254. *Slaviansky on Twenty-seven Cases of Laparotomy.*—In the *Russkaia Meditzina*, Nos. 6 and 7, 1884, Professor K. F. Slaviansky, of St. Petersburg, describes twenty-seven laparotomies performed by him in 1878–83. His results are as follows:—Exploratory laparotomy, 5 cases: 4 recoveries, 1 death: mortality per cent., 20. Partial ovariotomy, 6 cases: 3 recoveries, 3 deaths: mortality per cent., 50. Complete ovariotomy, 11 cases: 9 recoveries, 2 deaths: death-rate, 18·1. Removal of ovarian cancer, 1 case, fatal. Laparotomy and removal of an echinococcus, 1 case, recovered. Laparo-myotomy: supravaginal amputation of the uterus: 1 case, recovered. Laparo-hysterectomy for hydrometra, 1 case: recovered. Cæsarean section, 1 case: fatal. There were thus 27 operations of which 8, or about 29·6 per cent., were followed by death. The fatal case of exploratory abdominal section was that of an ovarian cancerous cyst which burst and caused peritonitis. On opening the abdomen, there were found extensive adhesions to the bowels, and numerous cancerous nodules disseminated over the parietal peritoneum. Four other operations remained only exploratory, two on account of disseminated cancer, and two because of firm and extensive adhesions on the whole surface of large cysts. Of six patients in whom partial ovariotomy was performed, three died within fourteen days after the operation. Two cases of complete ovariotomy died from septic peritonitis within three or four days. Of eleven cases of complete ovariotomy, in six the pedicle was treated after the extraperitoneal method, and in five after the intraperitoneal. All the operations were conducted with strict Listerian precautions.

3255. *Tipiakoff on Faradisation in Obstetric Practice.*—In the *Vratch*, Nos. 24 and 25, 1884, Dr. V. V. Tipiakoff describes the results of faradisation as used in Professor A. M. Makëëff's obstetric clinic in Moscow. The conclusions at which the author arrives are these. 1. The electric current is a powerful as well as a simple and safe means of inducing uterine contractions; hence, it is indicated for inducing abortion or premature labour; also in cases of uterine atony and *post partum* hæmorrhage. 2. Since the strength of the uterine contractions bears on the rapidity of dilatation of the os, faradisation is indicated wherever a more rapid dilatation of the os is desirable; as, for instance, in cases of hæmorrhage depending on placenta prævia, or accompanying abortion with an irregular course. 3. In the puerperal period, faradisation favours a more regular and complete involution of the womb. 4. In cases of puerperal endometritis, faradisation brings about continuous uniform uterine contractions, and in this way assists the organ to expel decomposed lochia; that is, it prevents the possibility of self-infection, and soothes the paroxysmatic pain which causes so great a discomfort to the patient.

3256. *Ott on Two Cases of Myomotomy after Schroeder's Method.*—In the *Vratch*, 1884, No. 2, p. 17, Dr. Dmitry O. Ott, of St. Petersburg, reports two cases of uterine myoma, in which he successfully removed the tumours after the rules laid down by Professor C. L. Schroeder, of Berlin. In his first patient, aged 34, with about nine years' symptoms of an abdominal tumour, the belly was as large as in the seventh month of pregnancy. The woman was greatly emaciated, and suffered from intense pain, which compelled her to abstain from any work, and keep a recumbent position. The operation was performed under the strictest antiseptic precautions. The abdomen was opened by a longitudinal incision along the linea alba, from the pubes up to a point two centimètres above the navel. The tumour being pulled out through the wound, it was found to be covered with veins as large as a lead-pencil, and proved to be connected with the wound by means of a thick pedicle occupying nearly the whole fundus. A thin solid India-rubber ligature was tightly tied around the base of the pedicle, and prevented from slipping off by means of a strong needle transfixing the pedicle. Then the tumour was removed by a circular cut, a bloodless stump of irregular outline being left. After cleansing by scissors, the surface of the stump presented a wedge-shaped appearance. The wedge-shaped defect was closed by means of three rows of sutures; the deepest ones united the parts at the bottom of the wound, a second row the middle parts, and a third row the superficial ones. In the course of suturing, care was taken to place the peritoneal surfaces between the lips of the wound (after Dr. J. F. Maslovsky's plan), in order to secure the most complete and rapid isolation of the peritoneal cavity from the surface of the uterine wound. After the removal of the India-rubber ligature, the stump was returned into the abdomen, and the wound closed with deep and superficial sutures. The patient left the hospital well on the seventeenth day after the operation. Equally favourable was the course in the second case. The patient was shown to the St. Petersburg Russian Medical Society about three weeks after the myomotomy.

V. Idelson, M.D.

3257. *Paladini on a Singular Cure of an Ovarian Cyst.*—Dr. Paladini narrates the following singular case in the *Gazz. Med. Ital. Lombardia* of Aug. 9. G. C., 37 years of age, unmarried, originally of good constitution, but now much weakened by suffering and fatigue, had suffered for ten years from an ovarian cystic tumour. The tumour first appeared on the left side, and enlarged gradually until it occupied the greater part of the abdominal cavity, and

projected forwards so as to exactly simulate a pregnancy at term. In the first year the commencement and development of the cyst was accompanied by almost constant acute pain; this gradually disappeared, and when the tumour had reached its full development occurred, almost periodically, twice a year for a few days. Menstruation was regular, and the patient had led an active and laborious life. On May 3 last, on coming out of church, she was run against and knocked down by some rough boys; she fell heavily, the abdomen striking the ground. She felt instantly an acute pain, as from some internal laceration, but did not take to her bed for two days. On examination, the change in form of the abdomen was striking; instead of being globular and projecting, it had become wide and flat, though always voluminous and occupied by much fluid, which the patient herself felt move in the abdominal cavity more freely than heretofore. The abdomen was everywhere painful, but more so in the left hypochondriac region. There were some fever, constipation, and vomiting. With the repeated application of leeches and poultices, and the administration of enemata or narcotics, these symptoms subsided in about ten days, the abdomen diminishing in size and becoming soft, yielding, painless, and normal everywhere Evidently there had been a rupture of the cyst from the fall, escape of the fluid into the peritoneal cavity, and complete subsequent re-absorption. Three months after the accident, there was no sign of reproduction of the fluid.

3258. *Levi on a Case of Absence of the Uterus.*—Dr. Riccardo Levi reports this case in the *Gazz. Med. Ital. Lombardia* for July 5. V. C., aged 19, at the age of puberty, began to suffer from chlorotic symptoms. She was treated with iron, arsenic, &c., and was sent to the baths of Levico and Recoaro. This treatment was continued for about four years, with advantage to the general condition; but the menses never appeared, and she never suffered from leucorrhœa. On examination, the organs appeared healthy, but there was pain in the left iliac region on pressure, which gave rise to globus hystericus. The external parts of generation were well developed, as were the breasts. It was noticed that throughout the examination the clitoris was in a state of erection. The vagina permitted easily the introduction of two fingers, but at the height of about 4½ centimètres from the posterior commissura, ended in a *cul-de-sac*, and the uterus could not be felt. By bimanual examination, and with one finger in the rectum and a catheter in the bladder, it was also proved to be absent. The ovaries could be felt by examination by the rectum and by the vagina.

G. D'Arcy Adams, M.D.

3259. *Apostoli on the Treatment of Fibro-myomata of the Uterus by Electricity.*—The author has presented to the Académie de Médecine (*Jour. des Connaiss. Méd.*, No. 31, 1884), a memoir in which he describes his method of treatment and gives the details of 118 observations. He makes use in ordinary cases of a platinum electrode introduced into the uterine cavity. When the canal of the cervix is obliterated, he restores it by means of the galvanic cautery. The positive electrode is introduced into the uterus when there is much tendency to hæmorrhage, the negative when there are symptoms of dysmenorrhœa or of chronic parametritis. The sittings last five to ten minutes, and must be repeated twenty or thirty times at intervals of two or three days. The second electrode is applied to the skin. The strength of the current must not exceed 100 milliampères. The results are said to be very good as far as the hæmorrhage and general state of health are concerned, and there is a distinct diminution in the size of the tumour.

J. S. Kaeser, M.D.

3260. *Macdonald on Salpingo-oöphorectomy.*—Dr. Angus Macdonald, in the *Edin. Med. Jour.*, August 1884, p. 97, records two cases of salpingo-oöphorectomy. Both patients derived immense benefit from the operation; and the author urges the younger members of the profession to avail themselves of the wonderful field which lays before them in the surgical treatment of tubo-ovarian disease. In regard to the origin of these cases, the author states that they are largely catarrhal, the inflammation extending from the endometrium along the tubes to the ovaries. Gonorrhœa is one of the most common causes of the inflammation; also endometritis after delivery may give rise to it. In selecting cases for operation great care must be exercised, as many of these patients are too ready to magnify any little sensation into undue importance, whilst others offer a great resistance to any operative measures being taken. The argument that by operation the woman is deprived of procreative power is not reasonable, as in ninety-nine cases out of one hundred, in which the operation is necessary, the pathological changes, already present, preclude the possibility of fertility.

3261. *Cummins on Non-gravid Hydrorrhœa.*—Dr. W. J. Cummins, in the *Brit. Med. Jour.*, July 1884, p. 20, refers to some remarks made by Dr. Oliver in the *Journal* of June 21, and states the case of a lady, who, at the approach of the menopause, had frequent gushes of watery fluid from the vagina. At the same time she suffered from a most severe form of pemphigus, affecting various parts of the body. Dr. Cummins explains these gushes of fluid by supposing them to proceed from vesicles of pemphigus occurring on the mucous membrane of the vagina, and perhaps the uterus itself. One thing is certain, that arsenic proved most useful in Dr. Cummins's patient in checking the hydrorrhœa and in curing the pemphigus.

3262. *Tait on a Case of Intestines Adherent behind the Uterus, causing Intense Pain, relieved by Abdominal Section.*—Mr. Lawson Tait, in the *Med. Times and Gaz.*, July 1884, p. 79, publishes the case of a woman, aged 32, who complained of constant pelvic pain dating from her last confinement, and much aggravated by the patient having 'strained herself' six weeks before. On examination, the uterus was found to be somewhat fixed with a mass behind it, very tender on pressure, and clearly cystic. Mr. Tait made no diagnosis, but advised abdominal section. This was agreed to and performed. Mr. Tait found a good deal of pus in the pelvis, and a coil of intestine adherent in the *cul-de-sac*. The adhesions were undone without much difficulty, and the abdomen was closed. The patient left the hospital in three weeks, and has ever since remained in perfect health.

Richard Neale, M.D.

3263. *Brock on Obstinate Vomiting of Pregnancy.*—Mr. Brock (*Glasgow Med. Jour.*) gives the following for regarding obstinate vomiting in pregnancy as due to individual idiosyncrasy. 1. Obstinate vomiting occurs in multiparæ, where the uterine tissues are lax, and where the os is soft, easily dilatable, and even patent enough to admit the tips of two fingers. This causes him to reject the theory held by Bre-

tonneau and Barnes. 2. Obstinate vomiting is absent in the majority of cases where there is a rigid state of the os, and where one would almost expect it invariably to be present, if the cause were that assigned by Dr. Barnes. 3. Obstinate vomiting is often absent in flexions and distortions of the uterus, and often present when there are no flexions or distortions. This would not be likely if Dr. Hewitt's theory were true. 4. Obstinate vomiting is often absent in inflammatory conditions of the uterus, and present when there are no inflammatory conditions. This ought not to be the case if Dr. Bennett's theory be correct. 5. Mr. Brock believes that a parallel condition is to be seen in other affections clearly influenced by the individual neurotic constitution : for instance, obstinate sea-sickness, the occasional vomiting that takes place in pseudocyesis, the proneness to convulsions in certain children when ill ; or, to take a specific case, the vomiting simulating the obstinate vomiting of pregnancy, in a non-pregnant woman, in whom the uterus was normal. 6. There is no definite line to be drawn between the ordinary cases of sickness in pregnancy and the more severe cases.

3264. *Garrigues on the Improved Cæsarean Section.*—In the June number of the *American Jour. of Obstet.*, Dr. Garrigues concludes a long and exhaustive article on the above subject. In it he gives an account of a case, with a kyphotic pelvis, on which he operated. The description of the pelvis is complete. When Cæsarean section is called for, all things being equal, he prefers the following order : gastro-elytrotomy, Cæsarean section, utero-ovarian amputation, and total extirpation of the uterus. He operates under the spray, and believes in full Listerism. He avoids the decidua in his deep uterine sutures, and aims to compress the bleeding sinuses. He prefers silver and silk for sutures. Catgut, he says, has proved decidedly bad in the puerperal womb.

3265. *Murphy on the Effects of Repair of Lacerations of the Cervix Uteri.*—Dr. P. J. Murphy (*American Jour. of Obstet.*), from a collection of well-observed cases, arrives at the following conclusions. 1. Repair of lacerations of the cervix uteri is usually followed by sterility. 2. The character of the labour is unusually severe and protracted, and, in a large percentage, laceration occurs a second time. 3. In order to ascertain the benefit of surgical interference in such case, an examination should be instituted several months after the operation, to determine the condition of the cervical canal, and, if conception have taken place, the condition of the cervix following delivery.

3266. *Emmet on the Etiology of Perineal Laceration.*—At a recent meeting of the American Gynæcological Society (*New York Med. Jour.*) Dr. Thomas Addis Emmet, of New York, read a paper on the above subject, a notable feature of which was an expression of the author's belief that in ordinary cases of laceration of the perinæum no symptoms were produced by the injury, after it had once healed, except those of a reflex nature. In many cases of complete rupture, the pelvic organs would still be found in their normal situation. Moreover, the ordinary forms of operation for closing perineal laceration rarely, if ever, overcame the symptoms for which they were undertaken. The explanation was that it was not a solution of continuity affecting the muscular structure of the perinæum that constituted the symptoms, nor the restoration of that structure that would accomplish the cure of such symptoms ; it was the concomitant injury of the fascial structures of the pelvis that was of consequence, and it was to the repair of those that our attention should be directed. Frequently the pelvic fascia was overstretched in difficult labour, especially if the perinæum were 'supported.' In the operation for restoring the perinæum, it was useless to carry the denudation so far externally as was often done. It should be limited to the true ostium vaginæ, and the perinæum should be further strengthened by bringing forward a transverse fold of the posterior wall of the vagina, even if there were no proctocele. The mistake should be avoided, however, of taking up too much of the posterior wall, for that would give rise to an amount of tension that would make it necessary to remove the sutures to prevent their cutting out. The author had used perforated shot with sutures of silk-worm gut, and had been pleased with the efficiency of this device. During the past year, all his operations had been done by the method described.

3267. *Mundie on Non-puerperal Pelvic Lymphadenitis and Lymphangitis.*—Dr. Paul F. Mundie (*Amer. Jour. of Obstet.*, Oct. 1883) calls attention to the distribution of the fine network of lymphatics surrounding the uterus, ovaries, and tubes, and which intersects the pelvic cellular tissues in all its recesses, and also mentions the fact that very little is said in regard to their being connected with glands. He has met with, and reports several cases where these glands and lymphatic vessels were in a diseased condition in non-puerperal women, and in which they simulated very closely 'chronic pelvic cellulitis.' He concludes by calling attention to the following points in his paper. 1. Inflammation of the pelvic lymphatic glands and vessels occurs in the non-puerperal state far more frequently than is generally supposed. 2. Such inflammation generally becomes chronic, and very closely simulates so-called 'chronic pelvic peritonitis and cellulitis,' both in its symptoms and physical properties. 3. Such lymphatics in a state of chronic inflammation possess certain characteristic features which permit their recognition by the examining finger. 4. This inflammation may either depend on and be secondary to uterine disease, or be entirely confined to the lymphatics and be apparently idiopathic. 5. The treatment resembles that of chronic pelvic inflammation, with one exception—viz., the primary necessity for the removal of the focus of irritation, if such exist before the lymphatic inflammation can be permanently relieved.

SYPHILOGRAPHY.

RECENT PAPERS.

3268. Barthélemy.—Late Inherited Syphilis. Lesions of the Liver. (*Archives Gén. de Méd.*, May and June, 1884.)

3269. Welander.—Some Researches on the Pathogenic Microbe of Gonorrhœa. (*Gazette Méd. de Paris*, No. 23, 1884.)

3270. Lee, Robert J.—Lecture Introductory to the Study of Infantile Syphilis. (*Lancet*, June 21 and 28, 1884.)

3271. Porter, W. S.—A Case of Syphilitic Paraplegia. (*Lancet*, June 28, 1884.)

3272. Forster, Thompson.—A Case of Syphilis and some of its Effects. Two Cases of Infection through the Fœtus, and Locomotor Ataxy. (*Ibid.*, Aug. 9, 1884.)

3273. Pick and Others.—Excision of the Initial Sclerosis of Syphilis. (*Brit. Med. Jour.*, Aug. 30, 1884.)

3274. Liebreich and Others.—The Treatment of Syphilis by Mercurial Injections. (*Ibid.*)

3275. Martineau.—The Inoculation of Syphilis on Animals. (*Ibid.*)

3276. Shoemaker.—Remarks on the Treatment of Syphilis by Hypodermic Injections of Corrosive Sublimate. (*Lancet*, Sept. 6, 1884.)

3277. Neumann.—Syphilitic Reinfection. (*Centralbl. für die Med. Wiss.*, No. 21.)

3278. Petrone, Luigi M.—On the Transmission of Syphilis to Animals. (*Gazz. Med. Ital. Lombardia*, Aug. 2, 1884.)

3279. Paul.—Gonorrhœa treated by Injections of Corrosive Sublimate. (*Gazz. Hebdom. de Méd.*, May 1884.)

3280. Weston.—The Treatment of Buboes by Aspiration. (*Indian Med. Gazette*, June.)

3281. Forster.—Syphilis and Marriage. (*Lancet*, August, p. 233)

Art. 3268. *Barthélemy on Affections of the Liver in Inherited Syphilis.*—In the *Archives Générales de Médecine*, Nos. 5 and 6, 1884, M. Barthélemy discusses the question of disease of the liver in connection with inherited syphilis, by the light of thirty-two cases (including one observed by himself), which he has collected from various sources, many being from English publications. From a study of these cases the author has arrived at the following conclusions. Inherited syphilis, like the acquired form, may give rise to four kinds of lesion of the liver; 1. a congestive form; 2. diffuse interstitial hepatitis; a cirrhosis rather hypertrophic than atrophic; 3. gummata; 4. amyloid disease. Affections of the liver are much more frequent than they are supposed to be, bearing in mind the number of subjects of inherited syphilis who survive. Judging from the frequence of affections of the liver, and from the fact that the cure or death of the patient may depend on whether specific treatment is adopted or not, M. Barthélemy thinks that the question of inherited syphilis should be borne in mind in every case of hepatic disease where the cause is doubtful, or the course unusual, either in respect of the age of the patient, or in the absence of a history capable of explaining the malady; for, after alcoholism and malaria, inherited syphilis is, in the author's opinion, the most frequent cause of disease of the liver, not only in early but in later life. The author appends to his paper a copious bibliography on the subject of syphilitic affections of the liver.

3269. *Welander on the Pathogenic Microbe of Gonorrhœa.*—Dr. Welander, of Copenhagen, gives an account of his researches on this subject in the *Gazette Médicale de Paris*, No. 23, 1884. The author begins by remarking that a large number of circumstances are in favour of the hypothesis that the spherical organisms discovered by Neisser in 1879 and named by him 'gonococci,' are the real cause of gonorrhœa. The organisms stain easily and distinctly in a one or two per cent. solution of fuchsin. They are found almost always in groups, (never in chaplets), and both inside and outside the pus corpuscles, as well as on the epithelium and free in the secretion. Under a very high power they appear as diplococci. These organisms are found in all cases of gonorrhœa, but never in other discharges, nor in the pus of ordinary abscesses. Dr. Welander has discovered gonococci in 129 cases of acute and 15 of chronic gonorrhœa in men, and in the purulent urethral discharge of 79 women. In 25 cases of gonorrhœa the author states that he discovered the persons from whom the disease had been contracted, and found gonococci in their discharges also. Experiments with secretions free from gonococci were always unsuccessful. For example, in five cases the fœtid secretion of balanitis was introduced into the urethra without any effect. This secretion contained small bacilli. Again, the vaginal secretion of a virgin, aged 14, which contained epithelial cells and spherical and bacilliform organisms, produced no effect when introduced into the urethræ of three men; and the same result followed the introduction in three instances of a fœtid purulent vaginal discharge containing a large number of bacilli in active movement. In another experiment three women were taken whose urethral discharge contained gonococci, but in whom the vaginal discharge was free from them. The vaginal discharge produced no effect on three men. But at the same time a small quantity of the urethral secretion of one of these women was introduced into the urethra of a fourth man, and at the end of two days he developed a discharge which contained gonococci. The same result followed also the introduction of the urethral discharge from the other two women into the urethræ of the same men in whom the vaginal discharge had produced no effect. The foregoing experiments, the author remarks, are strongly in favour of the pathogenic nature of the gonococcus, but they do not prove it. For proof, successful inoculation of the cultivated organisms would be necessary. But Dr. Welander has not yet succeeded in cultivating the gonococci, and he does not consider the published reports of the experiments of Bokai and of Bockhardt conclusive, although those observers allege that they have cultivated the gonococci and successfully inoculated them.

3270. *Lee on Infantile Syphilis.*—In a lecture introductory to the Study of Infantile Syphilis, delivered at the Great Ormond Street Hospital for Children (*Lancet*, June 21 and 28, 1884), Dr. Robert J. Lee discusses several interesting points connected with the inherited form of the disease. With regard to infection of the mother through the fœtus, Dr. Lee thinks there can be no doubt that, as Mr. Hutchinson has said, this mode of infection is in frequent operation. As there are three individuals concerned in such cases (the father, the mother, and the infant), we have to study the disease under three aspects: first, that of acquired syphilis; second, that of infection of the mother by the fœtus; third, that of inherited syphilis. As to the way in which infection passes from the fœtus to the mother, Dr. Lee suggests that it may occur by absorption of a portion of an infected ovum with the substance of the chorion into the maternal system at an early period of gestation, and before the development of blood-vessels has taken place. Dr. Lee considers it difficult to form any clear idea of the mode in which the poison can pass from the fœtus to the mother through the blood. Though syphilis presents different features according to the mode of its propagation in one or other of the three ways already mentioned, it is very important that we should not at present make up our minds as to the disease being transmitted in its entirety. Clinical facts, in Dr. Lee's opinion, are quite as strongly in favour of the disease being transmitted in different degrees as in

its entirety. As regards the prevalence of syphilis, the number of cases at the Children's Hospital, Great Ormond Street, is rather over 2 per cent.; for example, in the year 1882, of 10,221 out-patients there were 275 cases of syphilis. The clinical study of the disease entails much trouble; for, when the history of the mother and child and of the other children of the family has been learned, the case is only half complete. The other half is the history of the father. It is this which is most difficult to obtain; and to which we must look for an explanation of the various effects produced both on the mother and on the fœtus. There are four classes of cases to be considered in the case of marriage after infection in the husband:—1. primary infection of the mother; 2. fœtal infection of the mother, with active symptoms; 3. fœtal infection of the mother with no symptoms in her, but with symptoms in the infant; 4. cases where neither mother nor child presents any symptoms. When symptoms of inherited syphilis appear very soon after birth, they are different from those which appear later. Of the early symptoms, the most marked are the peculiar cachexia, and snuffling. Of the late symptoms the most characteristic are the condyloma ani, and the syphilitic furuncle or gumma. The latter begins as a nodule deeply seated beneath the skin, and gradually, as it approaches the surface, becomes softer and indicates its existence by a bluish-red colour of the skin with slightly elevated surface and little or no pain. Dr. Lee thinks that clinical study of these symptoms will lead to the conclusion that the first set, the more serious, are generally associated with a history of rather recent infection in the father, whether the mother have shown symptoms or not; and that the latter, the less serious, are most common when the date of infection in the father is more remote and the mother has shown no symptoms; at least, that this is true of those cases where the child has had none of the more serious symptoms previously.

3273. *Pick and Others on Excision of the Initial Sclerosis in Syphilis.*—In a paper on this subject, read before the International Medical Congress at Copenhagen, Professor Pick, of Prague, said (*Brit. Med. Jour.*, Aug. 30, 1884) that he always distinguished carefully between the cases in which the glands were indurated and those in which they were not. When the glands were affected they also must be excised; but in such cases, whether excision were practised or not, general symptoms almost always followed. Simple excision of the sclerosis when the glands were affected would never be successful, and no excision availed when the deep glands were swollen. The result of excision was most commonly only to cause delay in the appearance, and not prevention, of general symptoms; but excision had shown that the indurated sclerosis was not the expression of general syphilis. The lymphatics had recently been found to be much enlarged in such cases: and the author believed that the syphilitic poison entered through these, and not (as Auspitz believed) entirely through the blood. Dr. Unna (Hamburg) believed that syphilis spread by the blood-vessels, by the lymphatics, and by simple contiguity of tissue. Professor Neisser said that, although it was not certain by what path the virus entered the system, still, as it was a bacterial virus, there was no theoretical reason why it should not be prevented from entering by timely destruction of the bacteria. Professor Bergh (Copenhagen) submitted statistics extending over some years, showing, in his view, the comparative worthlessness of excision as a protective measure. M. Leloir and M. Barthélemy (Paris) adduced cases in which excision a few hours after the first appearance of the initial lesion had failed to prevent infection. M. Martineau thought the chancre was a manifestation of general infection, and that it was, therefore, useless to excise it.

3274. *Liebreich and Others on the Treatment of Syphilis by Mercurial Injections.*—Professor Liebreich, of Berlin, maintained before the International Medical Congress (*Ibid.*) that the conditions requisite in any mercurial compound for subcutaneous injection were that it must not precipitate albumen, that it must be indifferent to the connective tissue, that it must not be decomposed by an alkaline solution, and that it must be easily broken up, so that with sulphur sulphide of mercury was precipitated. In the author's opinion, all these conditions were fulfilled by the formamide of mercury, which was easily prepared by precipitating the oxide by carbonate of ammonia and dissolving it in formamide. M. Martineau believed that subcutaneous injection was the only reliable method; he had used it exclusively for the last few years. Professor Neisser thought that the formamides were eliminated too quickly. Professor Doutrelepont (Bonn) did not believe formamides to be absolutely the best form for injection. Dr. Shoemaker (Philadelphia) said that, after long experience of the various methods of injecting mercury, he had come back to the simple solution of corrosive sublimate in water as being the most effective and the least irritating. Dr. Wolff (Strasburg) had made and injected the formamides five years ago. He always used them freshly made from triturated solutions, and they then worked quickly and well. M. Barthélemy always used the peptones for injection, and found that they acted quickly. He believed, however, that pills were by far the best and simplest method for continued treatment. Professor Kaposi (Vienna) said he found injections useful, but he considered that inunction was by far the quickest and most vigorous method of cure.

3275. *Martineau and Pick on the Inoculation of Syphilis on Animals.*—M. Martineau (*Ibid.*) said he had successfully inoculated a monkey with syphilis, having produced a distinct chancre, erosive and ulcerative syphilides of the skin and pharynx, and papular syphilides of the scrotum and thigh. Professor Pick said he had seen a monkey which Dr. Klebs alleged that he had syphilised. He was only acquainted with syphilis in the human subject; but the eruption on the monkey in question looked to him more like varicella than like a syphilitic eruption.

3276. *Shoemaker on the Treatment of Syphilis by Hypodermic Injections of Corrosive Sublimate.*—Dr. Shoemaker, of Philadelphia, states (*Lancet*, Sept. 6, 1884) that he regards the treatment of syphilis by hypodermic injections of a solution of corrosive sublimate as more rapid, reliable, cleanly, and less dangerous than internal exhibition of mercurials or iodides, or both, or mercurial inunction. Dr. Shoemaker uses a simple watery solution of the sublimate as suggested by Lewin, but in larger doses. Thus the author has found it necessary in many cases to inject as much as half a grain per day. These strong injections were readily borne provided they were sufficiently diluted, not less than

half a drachm of fluid being used for half a grain of sublimate. The injections were always pushed until the usual effects of mercury were produced. In no case of syphilis has Dr. Shoemaker found it necessary to use more than thirty injections, though he has frequently continued the after-treatment for a month or two with iodide of potassium.

ARTHUR COOPER.

3277. *Neumann on Syphilitic Reinfection.*—The author (*Centralbl. für die Med. Wiss.*, No. 21) is of opinion that only those cases of syphilitic reinfection should be regarded as proved in which, besides secondary phenomena, an initial sclerosis with consecutive appearances has been observed. On the other hand, the appearance of ulcers of gristly consistency, but without secondary symptoms following, is no proof that syphilis has been acquired a second time. For all inflammations affecting the penis easily induce a considerable exudation, on account of the rich supply of blood and lymph-vessels ; and when the preputial orifice is narrow, a considerable congestion, with its consecutive results, thickening and hardening of the tissues. Moreover, gummata may occur on the prepuce. These may be pretty hard, and may ulcerate superficially, causing more or less infiltration and sclerosis. If we apply this observation to the published cases of so-called fresh infection, we see how extraordinarily few are the genuine cases. In accordance with this, observers of such rich experience as Ricord, Bärensprung, Sigmund, and Fournier, have never seen a case of reinfection.

E. J. EDWARDES, M.D.

3278. *Petrone on the Transmission of Syphilis to Animals.*—Seeking to settle the question of the transmissibility of syphilis to animals, Dr. L. M. Petrone (*Gazz. Med. Ital. Lombardia*, Aug. 2, 1884) undertook the following research. Twenty-four animals—cats, dogs, and rabbits—were inoculated under the conjunctiva of the globe of the eye with the secretion and fragments of six hard chancres, belonging to six patients affected with grave general syphilis. The animals were carefully watched for more than four months by Dr. Petrone, and showed no sign of syphilitic disease. In two, however, after a fortnight, there were evident signs of a tubercular process in the eyeball. The animals were then all killed, and no trace of syphilis could be found on autopsy. The bodies of the two animals affected by ocular tuberculosis presented manifest lesions of diffused tuberculosis in the lungs, pleura, peritoneum, intestine, and kidneys. The tubercles of the eye, and of the other organs mentioned, examined under the microscope, showed distinctly bacilli, colouring well with Weigert's reaction, identical with those described by Koch. Some fragments of these tubercles, inoculated under the skin of four rabbits, gave rise to the development of general tuberculosis after seven weeks. In the tubercles of these animals, also, Koch's bacilli were present. Microscopic examination of the secretion and of portions of the syphilitic ulcers which had served for the inoculation experiments showed very clearly the microbe described by Klebs, which also coloured well with Weigert's reagent. These experiments show that most probably animals are not disposed to syphilisation ; that the syphilitic virus in rabbits may give rise to ordinary tuberculosis ; that authors who have imagined that they have inoculated human syphilis in animals, either have succeeded in producing tuberculosis, which is the more likely, or some other lesion not syphilitic in nature. Dr. Petrone feels certain that it is only waste of time to prosecute further such researches.

G. D'ARCY ADAMS, M.D.

3279. *Paul on Gonorrhœa Treated by Corrosive Sublimate Injections.*—In the *Gaz. Hebdom. de Méd.*, May 2, 1884, it is stated that Dr. Constantine Paul employs injections of corrosive sublimate in the treatment of gonorrhœa. The strength of the solution used is 1 to 20,000 parts of water. This strength is said to be sufficient to destroy the microbe of gonorrhœa, and the author requests that a trial be made with this solution in various stages of the disease.

3280. *Weston on the Treatment of Buboes by Aspiration.*—Mr. Weston, in the *Indian Med. Gaz.*, June 1884, states that he has seen two cases of bubo successfully treated by the late Surgeon-Major Hogg by means of the pneumatic aspirator. In one case the operation had to be repeated once. A pad and bandage were used after the pus had been drawn off. The patients were soon able to get about, and ran no risk of having an unhealthy sore open for weeks, as is often the case when buboes are laid open in the ordinary way. [A glance at Sect. 1183 : 3 of the *Medical Digest* will show that this is an old and well-known plan of treatment.—*Rep.*]

3281. *Forster on Syphilis and Marriage.*—Mr. Cooper Forster, in the *Lancet*, August 1884, p. 233, narrates a very interesting case of syphilis, and some of its effects. A man, aged 30, had a hard chancre in 1862 ; he was treated for four months with mercury and iodide of potassium, and from 1863 until the spring of 1882 he had no symptoms of syphilis. In 1865 he married a strong healthy girl, who aborted four months afterwards, after having had sores on the vulva, sore throat, and a copper scaly rash. In May 1866 a seven months' child was born, with marked symptoms of syphilis ; this died in ten weeks. In May 1868 the wife was again pregnant, when she was suddenly seized with difficulty of breathing, and died before medical aid was obtained. In 1872 the patient married again, his second wife miscarried at the sixth month, but did not again become pregnant for some years. In 1876 the patient and his wife were put under a course of mercury and iodide of potassium for over two months. In 1878 a healthy eight months' child was born, and in March 1880 a healthy child was born at full time. In January 1881 the husband had a fall, the effects of which he felt for a time, and then they passed off. In the spring he showed signs of locomotor ataxy, and in the autumn of 1882 he died, in spite of treatment with mercury and iodide of potassium.

RICHARD NEALE, M.D.

PATHOLOGY.

RECENT PAPERS.

3282. TIZZONI.—On the Histological Alterations of the Medulla Oblongata and Vagi which determine the Phenomenon of Cheyne-Stokes Respiration. (*Resoconto dell' Accad. delle Scienze di Bologna*, May 1884. Reported in *Gazz. Med. Ital. Prov. Venete*, July 26, 1884.)

3283. HEUBNER.—Experimental Diphtheria. (*Bull. delle Scienze Med.*, May 1884.)

3284. HUNT, J. S.—Cystic Tumour of the Thyroid Body. (*Brit. Med. Jour.*, July, p. 20.)

3285. TAYON.—The Micro-organism of Typhoid Fever. (*Acad. des Sciences.*)

3286. Sabourin.—The Glissonian Origin of the Subhepatic Veins and their share in the Topography of Hepatic Lesions. (*Revue de Médecine*, August.)

3287. Brieger.—The Decomposition-products of Bacteria. (*Zeitschr. für Physiol. Chemie.*, Band viii., Heft 4.)

Art. 3282. *Tizzoni on the Histological Alterations of the Medulla Oblongata and Vagi which determine the Phenomenon of Cheyne-Stokes Respiration.*—In this paper (*Resoconto dell' Accad. delle Scienze di Bologna*, May 1884) the author gives the histological report of a case in which Cheyne-Stokes respiration was occasioned by a chronic ascending neuritis of the vagi and by a disseminated sclerosis of the medulla oblongata, in sequence to grave heart-disease. The neuritis, affecting the nerves generally in their peripheral parts, became more limited as it approached their central parts; it was accompanied in some points by infiltrations of blood into the endoneural and perineural lymphatic spaces, and on the right side only reached the medulla oblongata. The lesion of the bulb (sclerosis) on one side ascended the large root of the vagus, and on the other extended along the zonal layer and, reaching the raphe, proceeded from the anterior towards the posterior parts, not affecting the grey substance of the fourth ventricle except for about half of the bulb, and for a very limited extent. In this part, the sclerotic patches were seated principally in the raphe crossing the grey substance and in the ependyma carpeting the longitudinal sulcus of the fourth ventricle (granular sclerosis of the ependyma); and from these points the sclerotic process was diffused to the right along the middle root, at least to the middle or internal nucleus and to the posterior olivary nucleus of the same side, reaching by this way the sclerotic process ascending the large root of the vagus. No alteration was found in the nucleus in the motor-root of the pneumogastric. Therefore, this lesion of the bulb involved a very limited portion of the origin of the right vagus, and by its seat finally divided on the right the centre of respiration into two parts, one superior and one inferior. In a case also in which the Cheyne-Stokes phenomenon was determined by uræmia from kidney-disease, the author demonstrates the bilateral lesions of the bulb, identical in site and nature to those described in the preceding case, although in a much less advanced grade. But although in the two cases described, morbid processes so different had determined identical lesions in the central nervous system, the author does not think that in every case there are always the same lesions to be found; when the phenomenon is transitory, very probably the material alteration is susceptible of resolution, or is not demonstrable with our present means of research. Hence arises the greater importance of these described cases, since they show, even in those cases in which no material alteration is to be found, to what part of the nervous system is due that functional alteration of the respiration, which constitutes the type of Cheyne-Stokes respiration. He denies that in the first case the alterations of the vagus and of the bulb were only in relation with the disease of the heart, since in cases of grave heart-disease not accompanied by Cheyne-Stokes respiration, these lesions have never been found. Finally, he holds that, of the alterations found in the nervous system, those which take the principal part in the production of the Cheyne-Stokes phenomenon are those of the medulla oblongata, those which affect in a determined point the sensory origin of the pneumogastric, either because in the second case lesions of the vagus were absent, or because, in another case very carefully examined, and in which the Cheyne-Stokes phenomenon did not appear, he found slight chronic neuritis of the vagi, without lesion of the bulb. Hence, the alterations of the pneumogastrics in the case of heart-disease with Cheyne-Stokes respiration, represent only one way of diffusion of the morbid process itself from the heart to the centre of respiration.

3283. *Heubner on Experimental Diphtheria.*—Cohnheim and Litten, by temporarily arresting the afflux of blood, saw appear in the respective tissues diphtheroid processes (necrosis from coagulation of Weigert). The author, following up these researches, produced a local diphtheria, not by the ordinary method of cauterising the mucous membrane, but by temporarily interrupting the blood-current. His experiments were made on the bladders of rabbits, the neck of the bladder being tightly ligatured with a silk thread for two hours. On the succeeding days the alterations produced on the vesical mucous membrane were carefully studied. On the first day, these alterations consisted in an intense hæmorrhagic œdema of the mucous membrane, the epithelium being raised and tumid. On the second day, there was a solid coagulated exudation. On the third day, true diphtheritic patches were found on the mucous membrane. Still later was formed a 'necrosis from coagulation' of the epithelium, and of the mucous and submucous tissues. Microscopically, this deposit, diphtheritic membrane, was seen to be morphologically identical with the deposits observed in diphtheria, following scarlatina, and in epidemic dysentery. This artificial diphtheria, then, is produced by the combination of grave inflammation with necrosis. That in the diphtheritic parts the circulation of blood existed even shortly before death, the author was able to demonstrate by the auto-injection of the vessels, like that which takes place in a very conspicuous manner in artificial pustular infection, in most evident degree, by means of the coloration of the bacilli. In man, local croup may be caused by spasm of the capillaries of the mucous membrane, lasting about two hours, the capillaries then again becoming pervious to the blood. Such a transitory interruption of the circulation may happen even from the pressure of a swollen tonsil on the vessel. The diphtheria artificially produced by the author was not transmissible by inoculation in healthy animals. In the second part of his work, Heubner seeks to establish an artificial synthesis between local diphtheria and general infection. To this end, he first inoculated animals in whom the mucous membrane was affected by local diphtheria, with pustular virus, and found an excessive accumulation of bacilli in the affected parts, but only in the interior of the vessels, and never outside them. Afterwards he inoculated animals, which were made to contract a local diphtheria, with diphtheritic masses from a man affected by grave diphtheria; the animals presented splenic tumour, hæmorrhage of the serous membranes, and died after two or three days with symptoms of acute general infection. Microscopic examination of the patches showed in the affected vessels of the mucous membrane certain bacilli, partly disposed in groups, partly distributed in diplococci, partly as chains of four links. The same result was obtained with inoculation of scarlatinal

diphtheria. However, the author affirms absolutely that the bacilli found do not represent the diphtheritic virus. If this were so, they must have been found also in the man in the vessels of the affected mucous membrane. That, however, the author has never succeeded in finding, although he has examined a long series of sections of the uvula. And for general infection there is no need of special diphtheritic microphytes. The author recalls the researches made to produce sepsis by the inoculation of the oral liquid of different men, sick and healthy (Vulpian). The micro-organisms found in the diphtheritic masses of the oral cavity are consecutive to the disease and not *vice versâ*. Therefore, as the author believes, the virus of human diphtheria has not yet been found to be constituted of an organised material.

G. D'Arcy Adams, M.D.

3284. *Hunt on Cystic Tumour of the Thyroid Body.*—Mr. J. S. Hunt, in the *Brit. Med. Jour.*, July 1884, p. 20, relates the case of a woman, aged 46, who was taken with a sudden attack of dyspnœa. There was a lump about the size of an orange in the throat, which, a neighbour stated, had increased in the course of a few minutes from the size of a walnut. Notwithstanding all efforts made at artificial respiration, the patient died in about ten minutes from the first onset of urgent symptoms. On *post mortem* examination, the lump turned out to be the isthmus of the thyroid gland, hollowed out into a ragged and irregular cavity containing recent blood-clot. The cause of death was evidently the effusion of blood into the cystic tumour, either directly by pressure on the trachea, or indirectly by pressure on the recurrent laryngeal nerves, causing spasm of the glottis.

Richard Neale, M.D.

3285. *Tayon on the Micro-organism of Typhoid Fever.*—According to a communication made by the author at the Académie des Sciences (Aug. 18, 1884), typhoid fever cannot be produced in animals by direct inoculation or injection of the blood or urine of the patients ; but the results are different when these fluids have previously been cultivated. A guinea-pig, inoculated with the cultivated microbe, dies after some hours, and the *post mortem* appearances are those of typhoid fever. The blood of the animal taken shortly before death also becomes virulent after cultivation.

J. S. Kaeser, M.D.

3286. *Sabourin on the Glissonian Origin of the Subhepatic Veins and their share in the Topography of Hepatic Lesions.*—In a paper in the *Rev. de Méd.* for August, M. Sabourin calls attention to the existence of venous branches connecting the subhepatic veins with the sheath of Glisson, which forms the investment of the biliary portal canals. These veins he terms the 'subhepatic Glissonian veins,' and describes them as existing on all the biliary portal canals of the third degree and upwards. They play as important a part in the evolution of systematic lesions of the liver, as do the subhepatic veins themselves. He then refers to five systematic lesions of the liver ; namely, pigmentation of the subhepatic venous territory, occurring as a senile change or in the subjects of atheroma, Bright's disease, leucocythæmia, &c. ; the so-called 'cardiac' liver ; ordinary or alcoholic cirrhosis ; fatty infiltration, affecting the portal biliary tracts, such as is frequently found in the subjects of chronic phthisis ; and nodular fatty degeneration. In each of these classes, he points out that the process of evolution is affected by these subhepatic Glissonian veins, whether the starting-point be the subhepatic, as in the first three, or the portal biliary system, as in the last two cases. For while in those starting from the subhepatic region the pigmentation, congestion, or cirrhosis (as the case may be) can be traced from the central subhepatic veins along radii formed by the subhepatic Glissonian veins towards the biliary system, in the case of the fatty infiltrations referred to, which have their centre of evolution in the portal biliary region, so that the sheath of Glisson is enveloped in a fatty zone, tracts of sound parenchyma found here and there abutting right upon the portal canals are shown upon examination to have followed the course of the subhepatic Glissonian veins from the sound region of the subhepatic veins up to the sheath of the portal canals. M. Sabourin, in conclusion, lays down the following proposition. In both the subhepatic and the portal biliary cirrhoses, cirrhotic anastomoses occur between the subhepatic and the portal systems, but in an inverse manner ; for—(1), in subhepatic cirrhoses the fibrosed tracts extend from the small veins towards the large portal canals ; (2), in portal biliary cirrhoses their course is from the small portal canals towards the large subhepatic veins.

Kenneth Millican.

3287. *Brieger on the Decomposition Products of Bacteria.*—Professor Brieger, in the *Zeitschr. für Physiol. Chemie*, Band viii., Heft 4, after some general remarks on decomposition processes, and on Koch's fundamental methods for the investigation of the bacteria concerned, makes reference to Bienenstock's recent researches, in which he discovered five well characterised species of bacteria as exclusively present in the fæces. The author then states that in addition to the above he has found another variety present in great numbers. This coccus is about the size of that occurring in pneumonia, and is found very frequently in the diplococcus form. When brought upon peptonised gelatin, it grows in white clumps that tend to increase in height rather than in breadth, assuming the form of pyramidal flasks. On the cut surface of a sterilised potato, it assumes the appearance of dirty white patches. It can be subcutaneously injected into animals without producing any ill effect. A small quantity of the pure cultivated coccus, introduced into a sterilised grape-sugar solution to which some freshly precipitated carbonate of lime has been added, will quickly cause a decomposition of the sugar with the evolution of ethyl alcohol.

T. Cranstoun Charles, M.D.

DISEASES OF CHILDREN.

RECENT PAPERS.

3288. Pott.—A Case of Fæcal Fistula of the Scrotum. (*Jahrbuch für Kinderheilkunde*, Band xxi., Heft 4.)

3289. Smith, Lewis.—The Hygienic Management of Summer Diarrhœa in Infants. (*Archives of Pediatrics*, Vol. i., No. 7.)

3290. Chapin.—A Case of Pseudo-membranous Colitis. (*Archives of Pediatrics*, Vol. i., No. 7.)

3291. Reclus.—The Fever of Growth. (*Gaz. Hebdom. de Méd. et de Chir.*, No. 34, 1884.)

3292. Shepherd.—Absence of the Lower End of the Rectum with Passage of Fæces through the Penis. (*Edin. Med. Jour.*, August 1884.)

3293. Shaw.—Plaster of Paris in the Surgery of Children. (*Med. Times and Gazzette*, July, p. 78.)

3294. Hill.—A Case of Extreme Outward Rotation of the Lower Extremities. (*Brit. Med. Jour.*, July, p. 61.)

3295. Lucas.—A Case of Perinephritic Abscess Cured by Drainage. (*Med. Times and Gazette*, July, p. 109.)

3296. Keetley.—Resection of Muscles in Infantile Paralysis. (*Brit. Med. Jour.*, May, p. 1058.)

3297. Barwell.—Chronic Disease of Joints. (*Lancet*, August, p. 179.)

Art. 3288. *Pott on a Case of Fæcal Fistula of the Scrotum.*—The case is described in the *Jahrbuch für Kinderheilkunde*, Band xxi., Heft 4, and occurred in a child aged 4 months. The child, who was born at the eighth month, appeared quite well up to the age of a fortnight; a red spot then showed itself on the middle of the right half of the scrotum, and rapidly increased, and the scrotum itself swelled up to four times its natural size and became dark red and shiny. Three weeks later the swelling broke, and, after discharging pus for some time, slowly disappeared. The opening gradually diminished in size, but would not quite close; and at the end of another three weeks fæcal matter and intestinal gases escaped from the wound, which was then reduced to the size of a pin's head. At first every defæcation and every act of crying, forcing, coughing, &c., was followed by thin fæcal discharge; later the discharge appeared only at rare intervals; it was identical with that passed *per anum*. On examination of the child at the age of 4 months, a round string, of the size of a lead-pencil, was felt within the scrotum, passing obliquely upwards and outwards from the fistula; when this string was squeezed, a greenish fæcal fluid exuded with a gurgling, hissing noise. The 'string' could not be replaced, and the inguinal ring could not be felt with certainty. The right testicle lay in the lower and hinder part of the scrotum, and the spermatic cord ran on the outer side of the string-like swelling. The left testicle was normal. The inguinal glands of both sides were enlarged, but the right much more than the left. The diagnosis was right inguinal hernia, with adhesion of (at least) its tip to the inner wall of the scrotum, the hernia probably consisting of the appendix vermiformis (Kocher, Guersant, Demme). The fistula no doubt arose from the end of the hernia becoming gangrenous. The mother refused her consent to operation.

3289. *Smith on the Hygienic Management of Summer Diarrhœa in Infants.*—In this paper, which is published in the *Archives of Pediatrics*, Vol. i., No. 7, Dr. Lewis Smith gives several useful hints. After a few preliminary remarks, he mentions the results of some experiments undertaken by him, in conjunction with Dr. Chadbourne, to determine the quantity of breast-milk taken by the child at each nursing. A fluid ounce of human milk was found to weigh 451·9 grains. The first observations related to twelve infants under the age of 5 weeks, eight of whom were nursed twelve times, and the remainder eight, nine, nine, and eleven times respectively in twenty-four hours. Each child was carefully weighed before and after nursing. The average quantity received by each in twenty-four hours was 12·41 fluid ounces. Therefore, a baby of the above age, fed every two hours, receives only about a fluid ounce at each nursing. The next observations were made upon fifteen infants between the ages of 5 weeks and 10 months, eight of them being under 6 months. The weighing showed that the younger took nearly the same quantity each day as the older in this group. The average quantity received by each was 24·6 fluid ounces. Hence, if there were eight nursings daily, the quantity taken at each nursing would be 3 fluid ounces. In diarrhœa, the infant, being thirsty, is very liable to have more milk given to it than it can digest. But, as a minimum of two hours should intervene between its meals, cold water, barley-water, or gum-water should be given, sometimes with the addition of a few drops of brandy or whisky. In the absence of breast-milk, the best food is Pfeiffer's peptonised milk. In the New York Infant Asylum, it is prepared by adding 5 grains of extract. pancreatis (Fairchild's), and 10 grains of bicarbonate of soda to one gill of warm water. This is then mixed with a pint of warm milk, and the mixture, in some convenient vessel, is placed in water kept at a temperature of 100° F. for one hour, or, if it become bitter, less. It is finally placed upon ice to prevent further digestion. Boiling would also arrest digestion, but then the ferment would be destroyed and unable to do further service in the child's stomach. The milk thus treated closely resembles human milk, and its casein is so digested that it is not precipitated by acids, or is only perceptible in tiny flakes instead of in large curds. Other foods suitable are well diluted cow's milk, malted farinaceous foods, a little white of egg, or scraped beef; but not meat-tea or condensed milk. Other measures are healthy surroundings, and, in chronic cases, change of air.

3290. *Chapin on a Case of Pseudo-membranous Colitis.*—This case is recorded in the *Archives of Pediatrics*, Vol. i., No. 7. John T., aged 5 months, was born at term, brought up at the breast, and was quite well till a fortnight previously, when he was suddenly taken with severe pains. Soon afterwards bloody discharges from the bowels set in, and continued, on and off, for six days. The stools then became free from blood, but were slimy. The day before Dr. Chapin saw him, the child was seized with severe straining, and there prolapsed from the anus something which the medical man in attendance mistook for the bowel, and pushed back. It returned with every motion, and was put back each time, but it gradually grew longer and thinner. When brought to the clinic the child appeared fairly nourished; his temperature was 101½. A substance which looked something like the mucous membrane of the bowel, and was about the size of an adult's little finger, protruded from one side of the anus. It was removed without difficulty, and on subsequent microscopic examination, was reported to consist of inspissated mucus, fibrin, blood-corpuscles, and disintegrating cylindrical epithelial cells. There were no blood-vessels or connective-tissue fibres. The patient was ordered chalk mixture and bismuth, and when seen three days afterwards the temperature was 100·3. The passages were less frequent, and no more membrane had been seen. Notwithstanding this apparent improvement, the child died quietly on the same evening. The duration of the complaint was seventeen days. Ralph W. Leftwich, M.D.

3291. *Reclus on the Fever of Growth.*—In a paper published in the *Gaz. Hebdom. de Méd. et de Chir.*, No. 34, 1884, the author reports several cases of this affection, which has been already carefully described by Bouilly, Guillet, and others. It is most frequent between the ages of 7 and 15, and seems to be generally caused by some unusual fatigue or exertion. The chief symptoms are fever, pain about one or more joints, and rapid

increase in length of the body. The fever varies in degree, duration, and character, but the temperature generally reaches 40° C. (104° F.). The pain, which is much increased by pressure, is localised in some typical situations, such as the epiphyses of the long bones, and more especially of the femur. There may be some effusion into the neighbouring joints, but never to any considerable extent. The third symptom is sometimes very marked, and Auboyer has reported a case in which the patient had grown 15 centimètres in two months. According to M. Reclus, the disease is a mild form of osteomyelitis : the diagnosis requires to be made chiefly from acute rheumatism and from destructive inflammation of the joints. J. S. Kaeser, M.D.

3292. *Shepherd on a case of Absence of the Lower End of the Rectum, with Passage of Fæces through the Penis.*—Dr. Shepherd, in the *Edin. Med. Jour.*, Aug. 1884, p. 118, reports the case of an infant, which was handed over by Dr. Moulson into the author's care. On examination it was found that there was an imperforate anus, and that the fæces passed through the penis. An incision was made in the middle line of the perinæum ; and, after dissecting to the depth of two inches, a fluctuating tumour was reached, which turned out to be a bowel full of fæces ; this tumour was punctured, and the edges of the bowel were brought down to the external wound by catgut sutures. The child made a good recovery, but the mother neglected to keep the opening open. When the child was six months old it was stout and healthy, but only a No. 12 catheter could be passed through the rectum. The mother stated that when the child took 'opening medicine,' fæces passed by the penis. No further operation was consented to by the mother.

3293. *Shaw on Plaster of Paris in the Surgery of Children.*—Mr. Shaw, in the *Med. Times and Gazette*, July 1884, p. 78, contributes an article on children's deformities. The restlessness and fidgeting of children makes it most difficult to obtain absolute fixation of a broken or deformed limb by means of ordinary splints and bandages, and the author describes examples of various cases which can be more readily treated by an apparatus introduced by Mr. Churchill. For example, in a case of talipes varus, the foot is carefully and powerfully manipulated, the ligaments stretched, and the bones moulded as much as possible to the correct position. A circle of webbing is fixed with letter-clips round the foot ; a strip of thick perforated tin about one inch wide is bent at right angles, the short arm of which goes across the sole of the foot, level with the joint of the great toe, and is clipped to the webbing previously applied. The long arm goes more than half way up the leg, and to the end of this arm a piece of string is attached. By pulling the string the foot is levered into a proper position, and is easily kept so by a plaster-of-Paris bandage applied while the extension is being kept up. The muslin clings to the jagged edges, and holds the foot with a firm grip. The limb must, of course, be encased first in a flannel bandage. Other deformities, as well as fractures and diseases of the joints, may be treated by this method, which will be found to be more satisfactory than that of encasing the limb in splints or in an apparatus similar to those in use for cases of fracture, &c., in adults.

3294. *Hill on a Case of Extreme Outward Rotation of the Lower Extremities.*—Mr. Berkeley Hill, in the *Brit. Med. Jour.*, July 1884, p. 61, reports the case of a child who was brought to him on Feb. 14, 1878 for congenital deformity of both lower extremities. The lower limbs were so everted that the heels looked directly forwards. A photograph of the child is given at the age of 6½ months, and another when 6½ years old. Treatment consisted in making the child wear outside irons, jointed at the hips, knees, and ankles, and dividing the tendines Achillis. The case is a good example of deformity, due, partly to defective structure of the knee-joints, but in all probability also to faulty posture of the fœtus *in utero*. It shows what success may be obtained by carefully training the limbs into natural positions. Treatment commenced at the age of seven months, and when the child was two years old she could walk fairly well. At the age of six years she could jump and skip like other children.

3295. *Lucas on a Case of Perinephritic Abscess Cured by Drainage.*—Mr. Clement Lucas, in the *Med. Times and Gazette*, July 1884, p. 109, publishes a case of perinephritic abscess in a child, aged 2 years. The patient met with an accident, being thrown on his back by another child, about three months before he came under treatment ; from the time of the accident he became fretful, and ailing. On admission to the Evelina Hospital, a large firm mass was detected in the right loin, there being no tenderness of the spine, and no extension of the swelling into the psoas region. Mr. Lucas decided to operate, and made an incision, commencing about an inch and a half from the spine, running forward parallel with the last rib. The sac of an abscess was reached after cutting through the abdominal muscles, and on being opened, a large quantity of thick curdy, but not offensive pus escaped from the opening. It was found that the abscess lay between the quadratus lumborum muscle and the kidney. The wound was syringed out with carbolic acid lotion, a large drainage-tube inserted, and antiseptic treatment carried out. The patient made a speedy recovery.

3296. *Keetley on Resection of Muscles in Infantile Paralysis.*—An article in the *Brit. Med. Jour.*, May 1884, p. 1058, draws attention to the case of a boy, aged 6, who has lately been operated on by Mr. Keetley, for inability to extend the right knee, the consequence of infantile paralysis. A longitudinal incision was made in front of the thigh, about three inches in length, ending an inch above the patella ; the skin was held apart by retractors, and one inch of the entire substance of the quadriceps was cut away with scissors, about two inches above the patella. The separated ends were united by means of carbolised catgut ligatures, and the wound dressed with iodoform. The lint was placed on a back splint at an angle of sixty degrees with the bed. The results of the operation will be made known when sufficient time has elapsed to test its efficacy.

3297. *Barwell on Chronic Disease of Joints.*—In the *Lancet*, August 1884, p. 179, Mr. Barwell treats of the management of chronic articular disease. The forms of malady more particularly referred to are those which attack children from one year to twelve, or even fourteen years of age, and which are generally combined with a strumous or scrofulous habit of body. These diseases, although arising in strumous children, are very rarely tubercular in origin. In certain parts of the body tubercle appears with great difficulty, and among these parts the synovial membrane is pre-eminent. If tubercle appear in a synovial membrane, or in the joint end

of a bone, it is a late production, and is the terminal, not the initial, point of a morbid process. Some experiments of Dr. Schüller's are cited in proof of the above statements. Twenty-four animals were experimented upon; tuberculous matter was injected into the lungs, and at the same time the right knee-joint of each animal was severely injured with a mallet. Though several of these animals died of what might almost be called tubercular intoxication, not a single joint out of 264 showed any trace of tubercular affection. Of the injured joints only six showed spots resembling initial tubercle, though the internal organs were beset with tubercle. From these experiments, the author concludes that the earlier phases of chronic joint disease are not tubercular. Mr. Barwell looks upon the cases which he brought forward as strumous, but not tuberculous, and therefore, under favourable circumstances, curable. He then details methods to make the circumstances favourable, and how to utilise them for the patient's benefit. The apparatus most preferred is one invented by Dr. Dumbrowski, of Dorpat University. Moulds are taken of the limb, above and below the joint, in poroplastic felt, and bars of steel or iron are fitted by an instrument maker, together with straps, &c. A drawing is given, together with a description of the manner of applying the splint in a case of disease of the hip-joint.

Richard Neale, M.D.

DERMATOLOGY.

RECENT PAPERS.

3298. Leloir.—On Purpura. (*Annales de Dermatologie et de Syphiligraphie*, Vol. v., No. 1.)

3299. Stocquart. — Chrysophanic Acid in Skin-diseases. (*Ibid.*, No. 1.)

3300. Morel-Lavallée. — Chloroform Purpura. (*Ibid.*, No. 2.)

3301. Vincentiis.—On Xanthelasma. (*Ibid.*, No. 2.)

3302. Molènes and Lermoyez.—Eruption caused by Dyed Feathers. (*Ibid.*, No. 4.)

3303. Moursou. — Phthirius Inguinalis and Taches Bleues. (*Ibid.*, No. 6.)

3304. Unna.—Treatment of Acute Affections of the Skin by Pastes. (*Monatshefte für Prakt. Dermatologie*, Vol. iii., Nos. 2 and 3.)

3305. Andeer.—Resorcin in Skin-diseases. (*Ibid.*, No. 5.)

3306. Curschmann and Eisenlohr.—Herpes Zoster associated with Perineuritis Acuta Nodosa. (*Deutsch. Archiv für Klin. Med.*, 1884, p. 409.)

3307. Grönvold.—Leprosy in Minnesota. (*Ibid.*, No. 1.)

3308. Keyes.—Local Hyperidrosis. (*Jour. of Cutaneous and Venereal Diseases*, Vol. ii., No. 1.)

3309. Riehl.—On Acute Pemphigus. (*Ibid.*, No. 5.)

3310. Fox.—Warts on Tattooed Lines. (*Ibid.*, No. 7.)

3311. Hardaway.—Unusual Papular Disease of the Skin. (*Ibid.*, No. 6.)

3312. Besnier.—Treatment of Ringworm by Croton-oil. (*Ibid.*, No. 7.)

3313. Duhring.—Paget's Disease of the Nipple. (*American Jour. of Med. Sciences*, July 1883.)

3314. Duhring.—Dermatitis Herpetiformis. (*New York Med. Jour.*, May 17, 1884.)

3315. Shoemaker.—Massage and Mechanical Remedies in Skin-diseases. (*Medical Bulletin*, Sept. 1883.)

3316. Schweinitz. — Paget's Disease of the Nipple and Areola. (*Medical Progress*, Feb. 2, 1884.)

3317. Duhring.—Case of Impetigo Herpetiformis. (*Medical News*, June 2, 1883.)

3318. Kaposi. — Skin-diseases in Diabetic Patients. (*Wien. Med. Wochensch.*, 1, 2, 3 and 4, 1884.)

3319. Duhring.—Sulphide of Zinc Lotion in Lupus Erythematosus. (*The Medical News*, Nov. 10, 1883.)

3320. Arning.—Bacilli Lepræ in Anæsthetic Leprosy. (Virchow's *Archiv*, Vol. xcvii., 1884.)

3321. Graham.—Leprosy in New Brunswick, (*Canada Med. and Surg. Jour.*)

3322. Carter.—Leprosy in India. (*Memoir addressed to the Bombay Government.*)

3223. Millican and Cripps.—Prickly Heat. (*Lancet*, Aug. 1884, pp. 264 and 307.)

Art. 3298. *Leloir on Purpura.*—The author (*Ann. de Dermatologie et de Syphiligraphie*, Vol. v., No. 1) relates the histories of two cases of purpura, in one of which extensive lesions were found in the cutaneous vessels, and in the other nothing was found. In the first case the patient, a man aged 50, was in a low condition; his blood-vessels were atheromatous, and his legs œdematous. From some unknown cause, certain parts of the legs became hyperæmic, and these hyperæmic spots became the seat of purpura. The patient died of double pneumonia. The vessels in the skin, and especially in the papillæ, were found enormously dilated; their walls were diseased (the condition being similar to that described as desquamative endarteritis), and there were capillary emboli. The hæmorrhage was a direct result of rupture of the blood-vessels. In the other case, that of a man aged 50, in a state of profound cachexia and tubercular, the purpuric spots had appeared about nine days before his death. The hæmorrhages were found in the middle zone of the cutis, and, except an occasional slight dilatation, the vessels were found entire and unaffected. A number of these vessels were found filled with fibrinous clots.

3299. *Stocquart on the Administration of Chrysophanic Acid by the Stomach and Hypodermically in Diseases of the Skin.*—Dr. Stocquart (*Annales de Derm. et de Syph.*, Vol. v., No. 1) reports that he has administered chrysophanic acid with good results in various forms of skin-disease, notably in eczema and psoriasis. He alleges that in 32 cases of eczema 30 were cured by its administration. He found that the dose which could be tolerated and from which good results followed was, for children 1 centigramme daily, and for adults 3 centigrammes daily. Yet some patients were intolerant of the remedy even in these doses. In the case of a woman, aged 24, who took only 15 milligrammes in two days, loss of appetite, nausea, palpitation, and giddiness, which forced her to keep her bed, supervened. Other similar examples are given. The hypodermic injections were followed by great local disturbance, and the author deprecates this method of treatment unless in exceptional cases. [From the reports of cases given by Dr. Stocquart in which the administration of chrysophanic acid was badly tolerated, it is evident that it should be given with great caution; and as most of the cases in which it was used were such as would probably have yielded easily to less risky treatment, it is not likely that the drug will be much employed as a medicine which is to be given internally.—*Rep.*]

3300. *Morel-Lavallée on Chloroform Purpura.*—Three cases, observed within three months (*Annales de Derm. et de Syph.*, Vol. v., No. 2) in the Beaujon Hospital, show that purpura may develop under the influence of chloroform inhalation. The patients were under the care of M. Labbé, who observed

the eruption. In all the three cases there occurred, at the beginning of the inhalation, within the space of one to two minutes, an eruption of purpuric spots. The spots were discrete, and about three to four millimètres in diameter. The blood flowed into these spots with sufficient force to convert some of them into sanguineous bullæ. The eruption in all the cases was on the trunk, and chiefly on the anterior surface of the thorax. As the eruption took place at the very outset of the inhalation, the author concludes that in these cases the cause is to be found in the emotional disturbance produced by its administration.

3301. *Vincentiis on the Structure and Histological Signification of Xanthelasma.*—Vincentiis (*Annales de Derm. et de Syph.*, Vol. v., No. 2) looks on the specific elements, the xanthelasmic cells, as 'endothelial' cells of the connective tissue, accumulated in lobulated masses in dilated interfascicular spaces. He considers, therefore, that xanthelasma is a tumour, having its origin in the connective tissue, and proposes to give it the name of *adipose endothelioma.* [Dr. Chambard, from whose abstract the above notice is derived, refers also to a theory put forth by Balzer, who believes that xanthelasma is due to a parasite—a microbe.—*Rep.*]

3302. *Molènes and Lermoyez on an Eruption caused by Dyed Feathers.*—The authors (*Annales de Derm. et de Syph.*, Vol. v., No. 4) describe an eruption that occurs in Paris on the hands of women who are occupied with feathers which are dyed with the aniline orange colours. The rash is vesicular, and the fingers swell and are the seat of painful sensations. Eventually phylctænæ form, and finally a condition which is termed a pseudo-eczema. In its earlier stages, the condition much resembles the inflammatory affection of the epidermis variously known as dysidrosis, pompholyx, and vesicular eczema, according to the respective views of various observers.

3303. *Phthirius Inguinalis and Blue Spots ('Taches Bleues').*—In 1877 (*Abstract by Dr. Chambard in Annales de Derm. et de Syph.*, Vol. v., No. 6) M. Moursou called attention to the coincidence of '*taches bleues*' and pediculi, and showed that all the parts of the pediculus did not equally produce the pigmented spot. M. Mallet has found that it is the middle part only of the body which, when it is inserted into the skin, produces the appearance. Now it is in this part that the salivary apparatus is situated. It is probably, therefore, to the saliva that these spots are due.

3304. *Unna on the Treatment of Acute Affections of the Skin, and especially of Eczema, by Pastes.*—Lassar recently recommended salicylic paste in the treatment of eczema. Dr. Unna (*Monatshefte für Prakt. Dermatologie*, Nos. 2 and 3, Vol. iii.) recommends the form of paste as being capable of wide application, and as being in many cases a better vehicle than fats. As a groundwork for his pastes he recommends 'white bolus'—(kaolin, 'China clay')—and oil. For example: boli albi, partes 2; olei lini, partem 1. M. Out of this paste, to make a good eczema paste, he adds liquor plumbi subacetatis, alone or with oxide of zinc. For example: boli albi, partes 10; olei lini (seu glycerini), 3; liquoris plumbi, 2; and with oxide of zinc the formula becomes: boli albi, olei lini (seu glycerini), āā partes 30; zinci oxydati, liquoris plumbi subacetatis, āā partes 20. Misce, fiat pasta. He recommends from experience lead paste prepared as follows: lithargyri subtiliss. pulverisati, partes 50, aceti, 80. Coque usque ad consistentiam pastæ, et adde olei lini (seu glycerini seu olei olivæ) partes 10. For a thin adhesive paste which can be used as an excipient for remedies which have an energetic action on the skin, he recommends as a basis: Amyli oryzæ, partes 3; glycerini, 2; aquæ destillatæ, 15. Coque usque dum remaneant partes 15. This may be used as a basis for an adhesive paste for some forms of eczema, thus: zinci oxydati, partes 50; acidi salicylici, 2; amyli oryzæ, 15; glycerini, 15; aquæ destillatæ, 75. Coque ad partes 140. As a basis for an acne paste, thus: sulphur. præcip., partes 40; calcis carbonatis, 2; zinci oxydati, 20; amyli oryzæ, 15; glycerini, 20; aquæ destillatæ, 75. Coque ad partes 120. Dextrin may be also used with advantage in the formation of these pastes. For example, as a paste for ephelides, Dr. Unna recommends: zinci oxydati, partes 10; bismuthi oxychloratis, 2; hydrarg. bichloridi corrosivi, 0·2 and 0·5; dextrini, aquæ destillatæ, āā partes 10; glycerini, 15. Fiat coquendo pasta. A good eczema paste is formed by a mixture of lead and dextrin pastes, thus: lithargyri, partes 30; aceti, 50. Coque ad 50; adde dextrini, aquæ, glycerini, āā partes 15, antea coctas. Fiat coquendo pasta. When nothing more is required than a rapid adhesion to the skin by means of a cheap neutral medium, simple gum may be used. Thus: zinci oxydati, partes 40; hydrargyri præcip. rubri, 2; mucilaginis gummi Arabici, glycerini, āā 20. Misce, fiat pasta (for eczema in children). Sacchari albi, zinci oxydati, mucilaginis gummi Arabici, glycerini, āā partes 5 (for excoriated nipples).

3305. *Andeer on the Use of Resorcin in Skin-diseases.*—Andeer (*Monatshefte für Prakt. Dermatologie*, No. 5, 1884) has found resorcin to be a valuable remedy in eczema. He relates the history of a case in which a boy 18 months old suffered from a painful eczema of the head and face, which prevented him from either laughing or crying, and rendered restraint necessary to prevent his tearing himself. The treatment consisted in rubbing in vigorously once a week an ointment of resorcin with vaselin, beginning with 5 per cent. and going up gradually to 80 per cent. in strength. The disease yielded entirely to this treatment.

3306. *Curschmann and Eisenlohr on Herpes Zoster, associated with Perineuritis Acuta Nodosa.*—The authors (*Deutsch. Arch. für Klin. Med.*, 1884, p. 409) relate the following singular case. A man 70 years old was the subject of violent neuralgia in the right shoulder and corresponding part of the neck, simultaneously with a severe eruption of herpes zoster in the course of the axillary, middle cutaneous lateral, and median nerves. There were at the same time fever and painful swelling of the axillary glands. The neuralgia persisted after the herpes had healed, and over the affected parts numerous large nodular swellings of the cutaneous nerves developed. Several of those nodules were excised and examined microscopically. The nerve-fibres were found intact. Numerous leucocytes were found between the nerve-bundles. The chief changes were found in the connective tissue in the form of numerous hæmorrhages, obstructed capillaries, and extensive cell-infiltration, in the form of a recent perineuritis. For a few days after the excision, the pains in the forearm were much less, but reappeared for a time. After some time the pain ceased. The patient at a later period

died of pneumonia. The nerves and spinal ganglia were found intact.

3307. *Grönvold on Leprosy in Minnesota.*—Grönvold (*Journal of Cutaneous and Venereal Diseases*, Vol. ii., No. 1) gives interesting information in regard to the colony of lepers in Minnesota. He states that at present, six cases and their localities are known, all immigrated from that part of Western Norway where the disease is endemic. None of them are confined to bed, and most of them are able to perform their daily duties. The following table will show some of the particulars of the cases.

Case.	Sex.	Age.	How long leprous.	How long in the country.	Form of Disease.	Leprous Relation.
		Years.				
I. ..	Male	58	18 years	27 years	Anæsthetic	Father, father's sister, brother, sister, cousin
II..	Male	29	7 years	20 years	Tubercular	Father, two brothers
III.	Female	29	7 years	16 years	Tubercular	None?
IV..	Male	35	16 years	12 years	Anæsthetic	None
V..	Male	67	prodromata in the old country	17 years	Anæsthetic	
VI..	Male	44	10 years	15 years	Anæsthetic	Probably a brother

Ten lepers of the emigrants are known to have died in Minnesota since the settlement of the country, all of them males. Of these seven have died in the last seven years, and the following table will show some particulars of the cases.

Case.	Age at Time of Death.	How long Leprous.	How long in America.	Form of the Disease.	Leprous Relations.
	Years.	Years.	Years.		
I. ..	49	24	19	Anæsthetic	Brother of mother's father
II..	56	14	24	Tubercular	A cousin
III.	35	10	9	Anæsthetic	Father's brother
IV..	About 30	3	13	Tubercular	Brother's father and brother diseased
V...	30	12	15	Tubercular	Brother's father and brother diseased
VI..	62	30	21	Tubercular first seven years, afterwards anæsthetic. Disease stopped before death.....	Brother and father's brother
VII.	30	—	10	— —	Mother's brother

All of them had lepers in their family; three of them had the disease in the old country; three got it in Minnesota—two ten years and one three years after their arrival. Four of the lepers—two of them living yet—have full grown children born in America; two have also full grown grandchildren. One, No. VI. of the last table, has fifteen grandchildren, aged from 2 to 22, and two great-grandchildren, and in none of them has a sign of disease been discovered. The other, No. I. of the first table, who belongs to a family strongly affected with leprosy—his father and his father's sister, his brother and his sister were lepers—has full grown children and many grandchildren of an age up to 17, all in good health.

3308. *Keyes on Local Hyperidrosis.*—Dr. Keyes, (*Journal of Cutaneous and Venereal Diseases*, Vol. ii., No. 1) presented to the New York Dermatological Society a case of unilateral hyperidrosis of the face. The patient, a man aged 32, had had the disease for some time. Otherwise he was perfectly well, with the exception of slight cystitis. No localised neuralgia. The sweating was on the right side of the face, and the drops of sweat stood out prominently. There were other points of sweating. Upon exertion, he sweated naturally on other parts of his body. From six to ten years of age, he had chorea on the other side of his face. One uncle died of rapid tuberculosis. The sensibility of the sweating side was diminished, but was more affected by cold than the other side. Dr. Morrow, who was present at the meeting, had had a case of unilateral hyperidrosis in a young woman, which disappeared spontaneously in a few years. He had another case in a medical student, which was attributed by the patient to a blow on the bridge of the nose, causing a deflected septum. A portion of the deflection was recently removed, resulting in the reduction of his catarrh and a decrease of his sweating. Dr. Bulkley had had a case occurring on the thigh, which passed away under tonic treatment.

3309. *Riehl on Acute Pemphigus.* — The case which is described under this name (*Wien. Med. Wochensch.*, translated in the *Journal of Cutaneous and Venereal Diseases*, Vol. ii., No. 5) was that of a male child first seen by Dr. Riehl when 14 days old, a bulla having been first noticed on the neck when the infant was 6 days old. The diagnosis of *pemphigus acutus neonati* (*pemphigus benignus*) had been made at its first examination, and was confirmed by the subsequent course of the disease. The leading symptom—the formation of bullæ on an erythematous surface—was developed very rapidly, and lasted altogether for fifteen or sixteen days. The loss of epidermis to which it gave rise was repaired by a new growth of cuticle, within a week of the rupture of the bullæ. The site of the latter was marked for a few days by a reddish discoloration, which afterwards turned to yellow, and left not the slightest scar. Microscopic examinations of the remains of the bullæ, and of the shreds of epidermis upon which their serum had dried, disclosed an abundance of fungous elements, whose arrangement and amount showed that they could not have been deposited by accident, more especially since their propagation within the sweat-pores and hair-follicles of freshly prepared specimens proved that the schizomycetæ must have existed in the epidermis before the eruptive process had commenced. The bullous integument was shown to be formed from the horny layers of the epidermis and cells of the stratum granulosum, together with isolated white blood-corpuscles. The fungous elements consisted, in the first place, of irregularly shaped clusters of conidia, each cluster containing from 10 to 100 individuals. These were situated between the epidermic layers, for the most part surrounding the follicular openings, though sometimes they were disconnected from the latter. In many places the hair-tubes and excretory ducts of sudoriferous glands adherent to the bullous integument were crowded with fungous elements, even to the entire occlusion of their passages.

3310. *Fox on a Case of Warts on Tattooed Lines.*—Dr. Fox (*Journal of Cutaneous and Venereal Diseases*, Vol. ii., No. 7) presented to the New York Dermatological Society a photograph of a case of warts occurring on tattooed lines. A young man had an anchor tattooed on the forearm five years ago, and, according to his statement, the warts appeared a year later. There were about twenty upon

the forearm ; and, with one exception, they were scattered upon the indigo lines.

3311. *Hardaway on an Unusual Papular Disease of the Skin.*—Dr. Hardaway (*Journal of Cutaneous and Venereal Diseases*, Vol. ii., No. 6) reports five cases under the above heading. In all the patients the disease had existed a number of months, and in one perhaps a number of years ; therefore, the eruption was of chronic type. Each and every papule presented a more or less characteristic colour : viz., so far as it can be described, a dark lemon-yellow, and in every instance to a greater or less degree a striking pseudo-vesicular appearance. The individual lesions varied in size from a grain of wheat to a split pea. They were solid in structure, non-pedunculated, and gave exit to a drop of blood upon puncture ; no sebaceous or other material could be squeezed from them ; they had no areolæ ; presented no aperture at any point ; were rounded or slightly flattened, and were smooth and resistant to the touch. When the lesions disappeared under treatment, they left behind no stain or scar. They were evidently non-contagious.

3312. *Besnier on Treatment of Ringworm by Croton-oil.*—Brocq (*Journal of Cutaneous and Venereal Diseases*, Vol. ii., No. 7) states that *à propos* of an energetic attack directed against the physicians of the hospital of St. Louis, by Dr. Ladreit de Lacharrière, Dr. Besnier has again pointed out the injurious character of the treatment of tinea by croton-oil. This treatment has long been recommended in France by Dr. Ladreit de Lacharrière, who fabricates for this purpose his well-known pencils of croton-oil to be rubbed over the affected parts. They produce an intense, often a suppurative, inflammation of the hair-follicles, as a result of which, according to the author, a cure is almost constantly effected. This procedure was formerly experimented with at the Hospital of St. Louis, and, after numerous trials, it was rejected as inefficacious and dangerous : dangerous, because the suppuration of the hair-follicle may determine an incurable alopecia, an unfortunate result which tinea tonsurans left to itself never produces. It is, moreover, inefficacious, since recurrences of the disease were observed in patients treated and discharged as cured by Dr. Ladreit de Lacharrière himself.

3313. *Duhring on Paget's Disease of the Nipple.*—Dr. Duhring (*American Jour. of Med. Sciences*, July 1883) reports two well-marked cases of this disease, and remarks as follows on its clinical aspects. It must be distinguished from eczema, which it resembles, and from ordinary cancer, which it is altogether unlike in its earlier stages. It seems to occupy a ground having the characters of both diseases. . . . The disease differs decidedly from eczema, where itching is one of the first signs noted. The circumscribed, sharply defined outline of the lesion, and the slightly elevated border, are also symptoms which do not obtain in eczema. The brilliant colour of the lesion is striking, and is more marked than in eczema. The absence of the 'eczematous surface,' characterised by appreciable discharge or by vesicles, pustules, or puncta, coming or going from time to time, and the absence of exacerbations, usual in eczema, may also be referred to. A point to which attention may also be directed is the infiltration, which is firm, or even hard, but is not deep-seated. It is rather superficial. In eczema, on the other hand, it is soft.

3314. *Duhring on Dermatitis Herpetiformis.*—Dr. Duhring reports as distinctive symptoms of this disease (*New York Med. Jour.*, May 17, 1884) that it manifests itself by the formation of erythematous patches of an urticarial or erythema-multiforme-like character ; herpetic vesicles of variable size, irregularly shaped or stellate, flat or raised, more or less grouped ; blebs of similar character ; pustules flat or acuminate, whitish in colour, with a more or less inflammatory base ; and papules, vesico-papules, and variously sized circumscribed infiltrations, all the lesions inclining to assume a herpetic character (taking herpes zoster as the type of eruption), accompanied with violent itching. One or another of these varieties of lesions might be present as one, or, as often happened, they might appear together as a mixed or multiform eruption, or the several forms might succeed one another during an attack or as a subsequent relapse. He arrives at the following conclusions. 1. The existence is shown of a distinct, clearly defined, rare, serious, herpetic disease of the skin, manifesting itself usually in successive outbreaks, characterised by more or less systemic disturbance, a variety of primary and secondary lesions, and severe itching and burning. 2. The disease is capable of appearing in many forms, having a tendency to run into one another irregularly ; the principal varieties being the erythematous, vesicular, bullous, and pustular, which may occur singly or together in various combinations. 3. The disease is protean in character, and is remarkable for its multiformity. 4. The pustular variety is the same manifestation as that described by Hebra under the name 'impetigo herpetiformis.' 5. The term 'dermatitis herpetiformis' is sufficiently comprehensive and appropriate to include all varieties of the disease. 6. It may occur in both sexes, and in women independent of pregnancy. 7. It usually pursues a chronic variable course, lasting for years, and is very rebellious to treatment.

3315. *Shoemaker on Mechanical Remedies in the Treatment of Skin-diseases.*—Dr. Shoemaker, amongst other mechanical remedies (*Medical Bulletin*, September 1883), recommends massage, which not only breaks up the exudation, but likewise stimulates the absorbents, and so assists in removing the inflammatory products from the tissues, and restores the skin to its natural soft and elastic condition. In chronic vascular eczema, especially where the parts become covered with confluent patches of papules, and on which there is more or less infiltration, dry, and attended with persistent and obstinate itching, the judicious use of massage will often not only remove the abnormal and pent up effete products, but will produce a sedative action on the irritation, and give the sufferer a blissful state of repose, followed with sleep, which formerly had been constantly interrupted by the itching.

3316. *Schweinitz on Paget's Disease of the Nipple and Areola.*—Dr. Schweinitz (*Medical Progress*, Feb. 2, 1884) examined the tissues microscopically in a case of Paget's disease of the nipple. He found as follows :—1. A dermatitis characterised by a proliferation, and at times degeneration of the mucous layer of the skin, and a dense small round cell infiltration, especially of the upper parts of the cutis, substituting the normally present tissue of the papillary layer ; 2. Proliferation of the epithelium of the galactophorous ducts, and its passage out into the surrounding connective tissue of the nipple ; 3. Distention of the lymph-spaces of the subcutaneous connective tissue, and their occupation by epithelial cells similar in character to those found in

the distended ducts ; 4. A similar epithelial proliferation in the gland-tissue of the breast, and the formation of a spheroidal-celled carcinoma.

3317. *Duhring on a Case of Impetigo Herpetiformis : Recovery.*—Dr. Duhring (the *Medical News*, June 2, 1883) describes a well-marked case of this rare and frequently fatal disease, in which the patient recovered. The patient was placed upon full doses of arsenical solution and wine of iron, and used locally an ointment of oleate of bismuth. The following week, new lesions still appearing, one half of the general surface was anointed three times daily with precipitated sulphur two drachms, olive-oil two drachms, lard an ounce ; upon the other half of the body the 'liquor carbonis detergens' (an alcoholic solution of coaltar), one part to four of water, was applied freely. Under these local remedies improvement set in at once, both seeming to act beneficially. The tarry substance was subsequently used (of full strength) upon the whole surface. A tonic saline aperient was also prescribed for daily use in connection with the iron and arsenical mixture, and under these remedies the patient made a satisfactory recovery.

3318. *Kaposi on Skin-diseases in Diabetic Patients.*—Kaposi (*Wien. Med. Wochensch.*, Nos. 1, 2, 3, and 4, 1884) describes a case of gangrene of the skin—gangræna diabetica bullosa serpiginosa—affecting a woman, aged 51, who suffered from diabetes. There were three isolated gangrenous foci on the left leg, and within the space which they circumscribed there were fifteen to twenty bullæ, from the size of a pea to that of a bean. The gangrenous patches had begun by similar bullæ, their size and form (*serpiginosa*) being determined by the junction of the necrosed areas which underlay the bullæ. An examination of the urine vindicated the correctness of the hypothesis that the gangrene was due to diabetes. The patient eventually died, there being little fever present during the whole course of the illness. Kaposi attributes the local destruction of the tissues to the presence of sugar, and points out the various morbid conditions of the skin from which diabetic patients are liable to suffer. These are—1, asteatosis and anidrosis of the skin ; 2, pruritus cutaneus ; 3, urticaria chronica ; 4, acne cachecticorum ; 5, roseola ; 6, eczema ; 7, paronychia diabetica ; 8, furunculosis and anthrax ; 9, gangrene ; 10, papillomatosis diabetica. The last-named of these affections he knows as yet only from the observation of a single case, that of a Brazilian medical man who came under his treatment in September 1882. This patient stated that he had suffered for twenty years from diabetes, polyuria, and polydipsia ; but he was still well-nourished and vigorous. His disease was entirely confined to the left forearm and hand, which were tensely swollen. The backs of the fingers were covered partly by excrescences united like agminate glands, and varying in size from a lentil to a kreuzer, partly covered by ulcers of like dimensions. The ulcers were rounded or kidney-shaped, and many of them were bordered by red granular easily bleeding vegetations, several millimètres in height, and discharging a sero-sanious fluid. The forearm presented very similar appearances, but with interspaces of healthy skin, and in this situation there was no diffuse swelling. On the elbow was a growth as large as the palm of the hand, and over two centimètres in height, deeply fissured, and having a slightly bleeding surface covered with warty protuberances.

3319. *Duhring on Sulphide of Zinc Lotion in Superficial Lupus Erythematosus.*—Dr. Duhring (*The Medical News*, Nov. 10, 1883) states that he has found sulphide of zinc lotion valuable in the treatment of some forms of lupus erythematosus. The following is the formula : take of sulphate of zinc and sulphuret of potassium each 30 grains ; rose-water, 3½ fluid ounces ; alcohol, 3 fluid drachms. If this strength agree with the skin, the two active ingredients may be increased to the amount of 1 drachm each to 4 ounces of fluid. The lotion should be applied lightly to the part for from five to twenty minutes by means of a sponge, allowing the sediment to adhere to the surface. The application may be repeated two or more times in the twenty-four hours, the skin being first cleaned of scales by means of soap.

3320. *Arning on the Presence of Bacilli Leprœ in Anæsthetic Leprosy.*—Dr. Arning, at present in Honolulu (Virchow's *Archiv*, Vol. xcvii., 1884) excised portions of the ulnar nerve in two cases of pure anæsthetic leprosy, and found bacilli lepræ in the connective tissue between the nerve-fibres. This is the first time that the presence of bacilli in the pure anæsthetic form has been demonstrated.

3321. *Graham on Leprosy in New Brunswick.*—Dr. Graham spent some days at Tracadie (*Canada Med. and Surgic. Jour.*, Oct. 1883) studying leprosy as illustrated by the patients who were confined in the lazaretto there. He came to the following conclusions. 1. The origin and early spread of the disease cannot be explained on the theory of hereditary transmission, although this theory may account in part for its further propagation. 2. Although endemic influences, such as climate, mode of life, diet, &c., may be strong predisposing elements, they are in no case the sole cause of the disease. 3. Leprosy at Tracadie was imported from without, and, finding there favourable conditions, was propagated from one person to another by contagion. 4. Finally, leprosy may be regarded as one of the least contagious of diseases, and one which will only spread under a combination of favouring circumstances such as were found in Tracadie. In all probability, the disease is communicated solely by means of inoculation, and opportunities for inoculation are few indeed, unless there have been long and intimate contact with diseased persons.

3322. *Carter on Leprosy in India.*—Dr. Vandyke Carter (*Memoir addressed to the Bombay Government*) remarks that in Bombay, amongst the thirty to forty patients under treatment in the ward for incurables in the Jamsetjee Jejeebhoy Hospital there were usually two, three, or four European lepers. At the time when he wrote there were three men ; latterly one had gone to England in search of medical aid, one died, and one had lately come. This useful refuge for the helpless was wholly occupied by the leprous ; it was intended for natives, but, there being no other public accommodation for European lepers, such poor sufferers had necessarily been admitted, notwithstanding the evident undesirability of treating European sick under the same rules as are intended for natives. There were other European lepers living at their own homes in Bombay, but naturally some difficulty existed in ascertaining their exact number. Without in any way pushing inquiry in this direction, he had lately seen three well-marked instances, in a boy at

school, a young woman, and an adult military man. Bombay still harboured in a crowded locality a leper-colony of most wretched subjects—men, women, and children; and the above three cases resided not far from this focus of loathsome disease. Dr. Carter had studied the bacillus lepræ, of which he gives the following description. 'The *b. leprœ* I find to be usually shorter and more variable in dimensions than the tubercle-bacillus — length $\frac{1}{16000}$ to $\frac{1}{6000}$ in.; less bent, often bulging in the centre, and thinning at the ends; oftener dotted in aspect or composed of distinct granules in linear series, the number and site of which differ considerably. The amount of small rods and signs of spore-production greatly exceed what has been seen in tuberculated tissues; yet the general characters and processes appear much alike in both sets of specimens.'

George Thin, M.D.

3323. *Millican and Cripps on Prickly Heat.*—In the *Lancet*, Aug. 1884, p. 264, Mr. Millican, in referring to Mr. Wharton's article on 'Prickly Heat' in the *Lancet*, states that he has met with several instances of this affection in the East, and found warm applications of bicarbonate of soda, with a small quantity of carbolic and hydrocyanic acids, gave speedy relief. Mr. Cripps, writing at p. 307, also states that he has met with many cases in India and other parts of the East; he always advised the wearing of an ordinary white calico shirt next the skin, and patients found this more comfortable than anything else. The two remedial measures which were found to be more efficacious than any others were: 1, a bath twice a day in fresh water with ordinary washing soda, in the proportion of about a pound to four gallons; and, 2, the same bath without the soda, but with the addition of carbolic soap, with which the body should be thoroughly well washed.

Richard Neale, M.D.

REVIEWS.

Article 3324.

Untersuchungen über die Semiologie des Harns. Von W. Zuelzer. Pp. 166. Berlin: Hempel.
Researches on the Semeiology of the Urine. By Dr. W. Zuelzer.

A close relationship exists between the organs of the body themselves and their waste products. The dependence of the tissue-changes, as for example in muscles and glands, upon the nervous activity is well known. Every stimulation of the nerves supplying an organ which increases its activity, at the same time increases the decompositions therein, its vascular supply being simultaneously augmented. In a rabbit in a state of rest, the muscular system contains only 36·6 per cent. of the total blood, but when in a state of activity nearly double this amount, or about 66 per cent. The changes that occur in an isolated piece of tetanised muscle have long been a subject of dispute, at least as to the exhalation of carbonic acid; but it is probable that not only is the amount of this gas increased when the muscle is active, but also that of the lactic acid, and of the alcoholic and ethereal extractives, while the albumin, the watery extract, the glycogen, the volatile fatty acids, and the kreatin and kreatinin contained in it are respectively diminished. The phosphates, particularly the inorganic, are also increased during muscular tetanus, being partly derived, possibly, from the decomposition of lecithin or nuclein. In the resting muscle an alkaline phosphate is probably present, which is decomposed during muscular tetanus with the formation of the acid phosphate. The abundant formation of carbonic acid at the different glands also speaks strongly of the chemical processes there occurring. The saliva and bile, we know, are much richer in carbonic acid than is the blood; and further, it has been shown that the secretion flowing away from an active gland has a higher temperature and pressure than the arterial blood supplying it. Secretion can also be obtained from a stimulated gland, even when its blood-supply has been cut off.

Dr. Zuelzer is strongly of opinion that investigations upon the tissue-changes can be made with a much greater probability of success by means of the urine than by any of the other discharges. The investigation, for example, of the intestinal discharges is surrounded with great difficulties; and even the results of the analyses, when obtained, by no means furnish a complete picture of the total excreta of the body, there being no control over the losses by the other channels of excretion.

The urine, normally and pathologically, contains a great number of very characteristic substances which we may regard as specific, seeing that they are undoubtedly only decomposition-products of certain of the constituents of the body. Thus, as a derivative of the red blood-corpuscles under certain morbid conditions, hæmoglobin may appear in the disease known as hæmoglobinuria; glycerin-phosphoric acid as a product of nerve-waste and destruction of blood-corpuscles; kreatinin from kreatin, one of the waste-products of muscle and probably of nerve also; and similar specific relationships also hold good in the case of the biliary pigments, leucin, tyrosin, oxyneurin, trimethylamin, certain combinations of the aromatic series, and iron.

The direct relationship between certain of the urinary constituents and the tissue-waste has been the subject of frequent investigation, but the results of these inquiries, it must be acknowledged, are very indefinite. For the nitrogen or phosphoric acid of the urine may be derived from the muscles, nervous tissues, or other organs, or even directly from the food; but to determine which is the specific source or sources in any individual case the data are so far insufficient. The assumption, however, seems strong and tenable that where, for example, the tissue-changes have chiefly concerned muscles, the same proportionate relationship exists between the nitrogen and the mineral constituents of the urine as is to be found in the constituents of the muscle itself. In other tissue-decompositions, again, for one part of nitrogen there will appear a larger proportion of sulphur and a smaller proportion of phosphoric acid; while, on the contrary, in the changes of such a tissue as the nerve-substance, for one part of nitrogen appearing in the urine there will be a much larger proportion of phosphoric acid, and of the other mineral constituents in correspondingly altered proportion.

In a series of experiments, Dr. Zuelzer gives the percentage of the total quantity of phosphoric acid in the urinary solids of a healthy adult as 2·2; when fed with boiled calf's lung, this became 0·5; with liver, 1·7; with kidney, 3·4 to 4·4; with brain, 4·5 to 7·2; and with bread and butter, 3·1. In certain

pathological conditions he found the percentage altered as indicated by the following numbers : typhoid, 0·8 ; croupous pneumonia, 1·4 ; paralytic dementia, 9·7 ; diabetes mellitus, 4·1. In some cases of prolonged chloroform-narcosis also the alterations in the percentage were very considerable : thus, an hour after a resection of the elbow, 4·4 ; 4 hours after an ovariotomy, 39·6 ; in extirpation of the diseased glands in a case of mumps—immediately before the operation the percentage was 3·9, but an hour after 28·3. The excretion of phosphoric acid would therefore appear to be diminished in febrile conditions, but increased where the brains or kidneys are affected, or where glycerine or butter, together with easily soluble phosphates, as contained in bread, are ingested in the stomach. After prolonged chloroform-narcosis also it would appear that marked decomposition-changes occur in the nervous tissues, and the same also in dementia.

For every 100 parts of nitrogen present in the total blood he finds that there are 1–5 parts of phosphoric acid, and 1–2 parts of sulphuric acid.

A consideration of some of the decompositions that probably occur in the liver is next entered into, such as the decomposition of hæmoglobin for the purpose of bile and glycogen formation : this body possibly yielding 87 per cent. of its nitrogen to the formation of urea, and 13 per cent. to the bile ; and in the case of the glycogen formation 97·3 per cent. of its contained nitrogen remaining over, and probably being disposed of in the form of urea. While both forms of decomposition are of highly probable occurrence in normal conditions, it is likely that more of the hæmoglobin is used up in the formation of bile than in that of glycogen ; but pathological as well also probably as certain physiological conditions may produce marked alterations in these proportions. Just as with the nitrogen, so also with the phosphoric acid of the blood-corpuscles—a part passes to the bile and the rest to the urine ; but as the whole of the phosphoric acid of the bile cannot be derived from the corpuscles, on the assumption that the bile decomposition of hæmoglobin alone occurs, we must assume the simultaneous glycogen decomposition of the same body ; for we find that the more hæmoglobin is decomposed into glycogen and urea, the higher will be the relative value of the phosphoric acid of the urine to that contained in the blood. The red corpuscles, we know, have a comparatively short existence, and a certain portion of them are regularly broken down in the liver with the probable formation, as we have seen above, of biliary constituents, urea, glycogen, and carbonic acid. In certain acute diseases this decomposition becomes very rapid, but even in normal conditions Quincke's researches would give a period of 2 to 3 weeks as the maximum duration of the life of a red blood-corpuscle. Iron, of course, is set free in this process ; part of it is excreted by the liver-cells, part is taken up by the spleen and red marrow of bones, and probably also part is used up in the liver in the generation of new red corpuscles.

Some very useful tables are given, showing the results of different kinds of alimentation on the constitution of urine, particularly as to its nitrogen, chlorine, phosphoric and sulphuric acids, and alkali and alkaline earth bases. When animals were fed with blood, for example, for every 100 parts of nitrogen in the urine there were 10 of phosphoric, and 17 of sulphuric acid ; when fed with fresh liver, 27 phosphoric and 17 of sulphuric acid ; with brain, 32 phosphoric and 22 sulphuric acid ; with fresh milk, 19 phosphoric and 15 sulphuric acid ; with boiled milk, 22 phosphoric and 40 sulphuric acid ; and with bread and butter, 27 phosphoric and 24 sulphuric acid.

A series of experiments are next detailed, indicating the influences exerted on the composition of the urine, particularly in the case of the nitrogen and phosphoric acid, by means of special drugs, foods, electric stimulation, and also in certain diseased conditions. The relative amount of the phosphoric acid was found to be increased by direct injuries to the brain and large nerves, by apoplectic seizures, after epileptic fits, in consequence of the action of chloroform, ether, morphia, chloral, &c., by the application of a constant current to the surface of the brain, and by the continued excessive ingestion of starchy matters ; on the other hand, it was found to be relatively diminished after the administration of strychnine and alcohol in large doses, in cases of syphilitic paralysis, in aneurism of the aorta, in chronic bronchitis, and in contracted granular kidney and leukæmia.

T. Cranstoun Charles, M.D.

Article 3325.

Report of the Pennsylvania Hospital for the Insane for the Year 1883, *containing a Memorial of* Thomas S. Kirkbride, M.D., LL.D., Late Physician-in-Chief and Superintendent. Published by order of the Board of Managers. Philadelphia. 1884.

We learn from this report that the Asylum contained 408 patients at the end of the year 1883. The number resident during the year was 277 males and 310 females ; 587 in all.

The event which naturally occupies most attention is the death of the Physician-Superintendent.

The Board of Managers have printed, along with the Report, a memorial of 136 pages, written by his widow. From it we learn that Thomas S. Kirkbride's ancestors belonged to the Society of Friends, that he was born in 1809 near Morrisville, on the banks of the Delaware, and that he graduated in 1832. After filling sundry hospital appointments and engaging for a few years in private practice, he was, in 1840, without any application of his own, made Physician-in-Chief and Superintendent of the Pennsylvania Hospital for the Insane. He died, in September 1883, after forty years' work, during which he said that he always went weary to his bed. He was the author of a book on the *Construction of Hospitals for the Insane*, which, though containing recommendations not always suited to our climate, is no doubt the best book on the subject in our language.

In obituary notices we do not expect dispraise ; but it somewhat startles us now and then to find the deceased belauded for virtues which we happen to know he did not possess. These remarks are made as applicable to all obituary notices, for we know of nothing against the character of Dr. Kirkbride save that he was human. To a stranger, the general effect of the memorial is rather that of an eulogium than of a biography. To one who has lived in the world, it seems strange that a man who had no faults had no enemies. His widow has shrunk from any mention of either, though we are told in passing

that Dr. Kirkbride had deep acquaintance both with personal sorrow and annoyance. Nevertheless, it is impossible to question the devotion of a life so entirely given up to the care of the insane. Some traits indicate a really fine character. Take the following.

'Yet notwithstanding his wonderful gift in the management of the housekeeping of the wards, so that report said, "Dr. Kirkbride never fails to see when a counterpane is laid crooked on a bed," and his eye was most quick to detect the least want of cleanliness at the hospital, in his own home, criticism, unfavourable criticism, was unknown. At table, complaints of food which chanced to be improperly prepared, were more distasteful to him than the unsavoury dish. "Why speak of anything which does not suit you? it requires little discernment to perceive that an article is poorly cooked;" —and so his taste was learned, not through fault-finding, but by the food left untouched upon his plate. His hours for meals were never materially changed. "People know when they can find me at home," was the imperative reason for keeping the early dinner hour chosen in 1841. For twenty-five years he breakfasted in summer and in winter at half-past six, and coming down at that time his family almost always found him at his desk. As may be inferred from his early rising, he was in the habit of retiring early also.'

One of the most interesting things in the memorial is a series of extracts from Dr. Kirkbride's reports giving his views upon many points in the management of the insane. The following passage bears on a subject which excites interest at present.

'Of late, much has been said and written about labour for the insane, its advantage to them, and its being a source of profit to institutions, showing a great want of practical knowledge of the subject. Moderate, wisely regulated labour is really serviceable to many of the insane; but hard work, so carried on as to be profitable to any institution, is very rarely of benefit to the patients, while often it is injurious to an unsuspected extent, to a class whom the excitement of disease stimulates to extraordinary exertion. Besides these, there are others, who uncomplainingly labour at the tasks assigned them, only because they are urged to do so, when their natural instincts would lead them to enjoy the rest for which they have a persistent craving, and which comes from an actual want of strength dependent on the existence of disease. It is never to be forgotten by those having charge of the insane that, much as the malady differs in form and degree, all of these cases are as truly the subjects of a serious disorder in a delicate organ, as are those who have any other sickness, in which the sufferers may be so much better able to describe their true condition, and to secure proper attention to their wishes.

'In providing day occupation for the insane, much of it must be very different from the hard work from which alone any material profit can be anticipated. For much the larger portion of the patients, walking or riding through the grounds or in their vicinity, with all the attractions that can be connected with them, will be much more valuable as remedies; and nearly as profitable pecuniarily, as labour usually is. Every one of the many forms of diversion that should always be liberally provided; and all the games, outdoors and indoors, especially those that give active exercise in the open air, have a positive value and really contribute more or less to the great objects for which these hospitals are established.'

As a contribution to a never-ending controversy, we give his views about mechanical restraint.

'My experience would indicate that on an average not more than 1 or 2 per cent. of all the patients require any mechanical means of restraint; that often a period of several months may pass without their being needed, and that any superintendent may conduct an institution without applying them, in case he is anxious to avoid the criticism of pseudo-experts, and willing to let his patients lose the advantages that may result from their occasional use. At the same time, I am equally positive that a practical familiarity with all forms of insanity and its treatment, will prevent any declarations like the positive dicta often heard in regard to this subject in many quarters. The number who now adopt these ultra views in reference to mechanical means of restraint in any case of insanity, is obviously diminishing; and it is to be hoped that, before a long period the belief will be universal, that while rarely necessary, yet in some cases they ought to be used, and that not to use them when thus required is neither professional, nor does justice to the afflicted.'

It may be doubted whether a man who has once been insane will derive much consolation from the consideration that it is a mere bodily ailment.

It should never be forgotten, wrote Dr. Kirkbride, 'that every individual who has a brain is liable to insanity, precisely as every one who has lungs is liable to pneumonia, or, as every one with a stomach runs the risk at some period of being a martyr to dyspepsia.'

It seems to us that here the analogy is misleading. Some men go through all the exciting causes of insanity, but never become insane; others become insane from causes apparently trifling. One may say every man who has a brain may have cerebritis, or be liable to have the brain-functions weakened; but to some people neither exhaustion nor inflammation of the brain will bring insanity. Dr. Kirkbride continued to hold very hopeful views about the curability of insanity.

'Insanity, when uncomplicated, properly and promptly treated, and having this treatment duly persevered in, may be regarded as curable as most other serious diseases; but its curability mainly depends upon these conditions. Of the class of cases alluded to, it is safe to say that about as many as 80 per cent. may be expected to recover. Most of these—restored cases—continue in the enjoyment of perfect mental health, and are as competent to fulfil all their social and public duties as they were before the accession of the disease.'

W. W. Ireland, M.D.

Article 3326.

The Use and Abuse of Pessaries. By G. Granville Bantock, M.D. London: H. K. Lewis. 1884.

This book, which originally appeared as a paper in the *Lancet*, has now been expanded into a memoir of 173 pages. Dr. Bantock deals firstly with cases of retroversion of the uterus of old standing; then with retroversion accompanied by menorrhagia, and with frequent abortions due to retroversion, as well as with other conditions associated with retrover-

sion, such as subinvolution, vaginismus, vaginitis, hypertrophy, and pregnancy. The concluding chapters treat of the various conditions of anteflexion.

Dr. Bantock is an advocate for the use of pessaries, and states that the kind which he has adopted for many years is that made out of block tin in nine different sizes.

He is of opinion that most cases of retroversion are perfectly curable, and relates the notes of many cases of uterine displacement which he has successfully treated by the application of pessaries.

In the treatment of anteflexion, Dr. Bantock appears to prefer the use of stem-pessaries, and of these he says that his own experience has taught him to give the preference to the instrument of Meadows. At the same time, he admits that the use of the stem should be hedged round with precautions.

As regards the abuse of pessaries, he says, 'there is nothing so prolific as error of diagnosis.' He has frequently known the ring-pessary inserted in cases in which there has been no displacement whatever. Again, he has seen a pessary which had been applied in a case of mucous polypus. The presence of a fibroid tumour in any part of the uterus is another contra-indication to the use of the vaginal pessary, although in Dr. Bantock's experience it is not always observed even by gynæcologists of repute. 'The first essential, then,' he concludes, 'in the intelligent use of the pessary, and for the avoidance of its abuse, is a correct diagnosis ; and the second is an understanding of the principles of its action : without these nothing but confusion, and probably injury, can follow.'

To the above propositions no objection can be offered ; and we trust that the perusal of Dr. Bantock's interesting monograph may prove of service to gynæcologists and practitioners at large.

FANCOURT BARNES, M.D.

ARTICLE 3327.

Report of the Rotunda Hospital for 1883. By ARTHUR V. MACAN, M.B.

DR. MACAN states that, to prevent the possibility of infection being carried by vaginal uterine tubes, they are all made of glass, and a separate vaginal tube is provided for every bed in the hospital. These, when in use, are kept in carbolic acid solution, and are boiled in the same solution before being again used for another patient. To guard against the injection of air into the vagina or uterus, which, besides being in itself very dangerous, is a fertile source of fœtid lochia and consequent self-infection, the old India-rubber syringes have been entirely replaced by irrigators, which act by gravity ; and, in order to render the air, if it should enter the vagina, as innocuous as possible, carbolic acid solution is constantly evaporated in the wards day and night. 'The latter precaution,' he says, 'I do not, however, look upon as very essential, and I intend shortly to try if we cannot get as good results without it.' The old gum elastic catheters have also been banished, and their places filled by silver instruments which, both before and after being used, are placed for a considerable time in a hot evaporating carbolic solution. He says : 'If every person's fingers who examines a woman during labour and every instrument that touches her are free from septic poison, we must look upon such a person as having so far escaped infection from without.' Consequently, Dr. Macan sees no necessity for any prophylactic antiseptic injections, whether vaginal or uterine, in the puerperal state. He has extensively used iodoform ointment for rendering and keeping the interior of the uterus aseptic. He introduces it into the uterus in the form of a pessary ; the amount of the drug in each being one drachm or one drachm and a half. This decomposes very slowly, and exerts its antiseptic action for three or four days at the least. It has also been remarked that it has a powerful effect in lessening the temperature, quite apart from its antiseptic action.

The number of women confined in the hospital during the year was 1,030, of which 62 were forceps cases, or 1 in 17·58 ; 5 cases of turning ; 8 cases of placenta prævia ; 4 cases of face presentation ; 2 cases of mania ; 1 case of induction of premature labour. Of the mothers 6 died, giving a mortality of 0·55 per cent., *i.e.* 1 patient in 181. Dr. Macan concludes from this that a patient delivered in the Rotunda Hospital during the past year ran far less chance of dying, than if she had been delivered in her own home by a private practitioner.

The forceps most commonly in use during the year was Barnes's.

FANCOURT BARNES, M.D.

ARTICLE 3328.

Alcoholic Inebriety. By JOSEPH PARRISH, M.D. Philadelphia : Blakiston & Co. 1884.

THIS is a methodical attempt to present the disease aspect of inebriety from a medical standpoint. The author has had considerable experience in the treatment of a variety of forms of inebriety, and his opinions are entitled to a fair consideration. He points out that though, during the past half-century, America has been covered by a marvellous network of temperance and prohibitory organisations, dram-drinking and drunkenness are on the increase ; and that therefore there is urgent need to go behind the actual accomplished mischief, and to elucidate the remote causes of the intemperance, with a view to indicating the most effective remedial measures to be employed in dealing with these disastrous results. Dr. Parrish describes the vice aspect of intemperance, which he, as a whole, condemns, while admitting that in the earlier stages of alcoholic indulgence there is something to be said for the denomination of vice. He then proceeds to discuss the crime view, pointing out that punishment is not reformation or cure. The description of the various phases of inebriety is ample and clear, especially as regards the solitary midnight inebriate, and, in all classes of drunkards, the tendency to special vices and to specific forms of violence. Traumatic inebriety is the name given to a large group of cases where accident or violence has been the point of departure to excess. Hereditary inebriety is descanted on at length, and some interesting observations are given on the relations between intemperance and insanity. The very full consideration bestowed on the phenomena and causes of inebriety leads up to several chapters on treatment. Dr. Parrish contends that insane asylums are not adapted for the cure of dipsomaniacs, and that these require special institutions, where an utter absence of stimulants is enforced, and where a special study is made of the idiosyncrasies of each patient, and the most appropriate treatment of the great variety of manifestations of

the protean pathological appearances induced by the habits of intoxication, is carried out. A summary is afforded of the opinions of a number of inebriates themselves, and attention is drawn to the varying effects of the different alcohols. The trance-state of the inebriate affords the author scope for some pointed and forcible remarks; the passages on the psychological state of drunkards, who in excited meetings take the pledge and then break it after a short interval, being unusually apposite to the Blue Ribbon excitement of recent date in England. The author is not so dogmatic in his statements in opposition to the vice aspect as some of his American brethren, and treats his subject with candour and lucidity. The book will exert a beneficial influence in impressing the important fact on the professional and public mind, that there is a physically diseased condition in confirmed inebriety, which abnormal state must be therapeutically treated if a permanent cure of the inebriate is to be effected.

NORMAN KERR, M.D.

ARTICLE 3329.

The Science and Art of Surgery. By JOHN ERIC ERICHSEN, F.R.S., Emeritus Professor of Surgery and Clinical Surgery in University College. Eighth Edition. Revised and edited by MARCUS BECK, M.S. and M.B., F.R.C.S.Lond. Vols. I. and II. Longmans & Co. 1884.

IT is difficult to review fairly a work of this kind. It is of huge size and of very comprehensive character, and one cannot help feeling some pity for the student who has to carry such burdens with him. Yet this is undoubtedly the text-book on surgery most used by students, and it is deserving of its high reputation. But it has now reached such proportions, that its more than 2,400 pages render it essentially a work of reference for the practitioner rather than a text-book for the student.

In this eighth edition Mr. Erichsen has associated with him Mr. Marcus Beck, and we must congratulate the latter upon having preserved the original character of the book. It is essentially the work of a sound modern surgeon. It is not a tedious and confusing compendium of everyone else's experience and opinion. It is the result of the experience and the forcibly and clearly expressed judgment of a practical surgeon, and yet the work of others has not been disregarded.

The two volumes are not in the least distinct from one another, but, as was the case in former editions, the second continues the subject begun in the first. And if such a work as this is meant for, and it certainly is used as, a student's text-book in surgery, we should like to see a chapter containing suggestions for students beginning their hospital work. Many will not think it necessary to have more than these two bulky volumes, and it would be valuable to them to know how to set about their work; and this information they must get from another book. They must have another work on minor surgery, another on ophthalmic surgery, and another on surgical diagnosis, before they can be considered fully equipped even in surgery. The coming student will want a hod or a perambulator or some mechanical means of carrying his impedimenta.

Of the work itself it would be difficult to speak too highly, and much care has evidently been bestowed upon it to bring it up to the present state of surgical knowledge. If it err at all, it is in that direction which seems necessary to successful teaching, the being dogmatic rather than suggestive. We are inclined to think a student might be led astray by such a statement as that 'if,' after an operation, 'the thermometer remains below 100° F., no anxiety need be felt on this score,' as it is stated in the previous line (p. 50) that 'the temperature is an infallible guide.' Some reference might be made to the danger indicated by too great a fall, but nothing of the kind appears either here, or later on, when discussing shock from operation.

In the very clear account of special amputations we find the term subastragaloid retained. Would not subastragular be better? And we should have been glad to see M. Tripier's modification of this operation mentioned, though Tripier calls it (we think incorrectly) a modification of Chopart's amputation.

We notice a very good account of the means of diagnosis in injuries to the hip, with illustrations of Nélaton's line and Bryant's triangle, and a description of the more elaborate triangle of Giraud-Teulon; but we should have been glad to see a more strongly worded caution about the necessity of keeping the anterior superior iliac spines level in measuring the lengths of the limbs.

It is misleading to students to restrict the term synovial membrane to bursæ, as is implied in Chapter LIII., where, under the head of 'Diseases of Synovial Membranes and of Muscles,' only bursæ are included in the former category. Of course, synovial membranes are found discussed under the head of 'Joints,' and therefore the confusion of terms is not easily explainable.

These are but trivial criticisms upon the substantial value of the work. The more we have looked into it, the more we find to admire. The pathological portions, which are apparently the work in great measure of Mr. Marcus Beck, are exceedingly clear and well illustrated, and contain the results of the latest contributions to this important branch of surgery. The same may be said as regards the more practical parts of the subject. The chapters on diseases of the bladder, the urethra, and on aneurism and on hernia, are very exhaustive, and repay careful study.

If there are omissions in small matters here and there, and special notice is taken of the experience of leaders of the same school, the real value of the work as a thorough guide to the science and art of surgery remains as high as it ever did, and even higher, notwithstanding its many rivals.

It would be difficult to speak too favourably of the manner in which the book is printed and bound; and with a work of this size the printing and binding add very materially to the usefulness. The illustrations are much improved generally, but there is still room for advance in illustrations to surgical works.

W. W. WAGSTAFFE.

ARTICLE 3330.

Manual of Diseases of the Ear. By THOMAS BARR, M.D. Glasgow: James Maclehose & Sons. 1884.

THIS, the latest addition to the text-books on the subject, gives in a convenient form the main facts of the otology of the present day. The work is divided into four parts. Part I. contains chapters on the

'Examination of the Ear,' 'Causes of Ear-Disease,' 'Affections of the Nose and Throat in their Connection with Disease of the Ear,' and on 'Methods of Treatment.' Parts II., III., and IV. deal respectively with diseases of the outer, middle, and inner ear. An appendix contains remarks on otalgia, and a brief description of the nervous and vascular supply of the ear; also a very useful list of 122 formulæ of remedies (both local and general) employed in diseases of the ear. The work is copiously illustrated with woodcuts; several, showing pathological states of the bone, are of interest. Those illustrating the membrana tympani are hardly distinct enough on account of their small size. We note that in the treatment of chronic suppuration of the tympanum, the author, when recommending boracic acid, cautions against firm packing of the powder. He has seen a case in which severe pain, giddiness, and fainting resulted from this procedure. In the chapter on diseases of the nose and throat (which, by the way, is a very important one) the author states his opinion that scabs and crusts in the nasal passages are more thoroughly removed by the syringe than by the nasal douche. We are pleased to find that, in treating adenoid vegetations, the author does not consider it necessary to continue treatment until all irregularities are gone. He finds by experience that it is sufficient to clear out the upper pharyngeal cavity, so as to permit free nasal breathing, after which the disease rarely returns. Throughout the work, we find evidence of a careful study of the literature of the subject, as well as of the author's large experience in these cases. The book will serve as an useful guide to the student, and, from its systematic arrangement and careful indexing, should form a handy work of reference for the general practitioner.

E. Cresswell Baber, M.B.

Article 3331.

Patogenia de la Sífilis, sus Relaciones con algunas Enfermedades Crónicas. Por José Francos Rodriguez. Madrid. 1884.

This little pamphlet of about forty-five pages is intended to put its readers in possession of the current doctrines concerning the nature of syphilis. The author disclaims any pretence to originality. The essay will no doubt prove of use in its own country; notwithstanding that the information it conveys is somewhat meagre. The writer appears, however, to be fairly acquainted with the French and German literature of his subject.

That the active agent in syphilis is a micro-organism, the author considers very probable; but this view, he thinks, cannot as yet claim to rank higher than an hypothesis. A rapid glance is cast over the various symptoms of the disease; and every lesion due to syphilis is found to be of an inflammatory character.

William R. Huggard, M.D.

Article 3332.

Lectures on the Diseases of Infancy and Childhood. By Charles West, M.D. Seventh edition. London. 1884.

This work is so well known and appreciated, both in this country and abroad, that a long notice of it becomes unnecessary. As a rule, after a book has passed through several editions it becomes less and less readable; but this does not apply to the present volume, for, while it has gained much by the skilfully dovetailed additions, it has lost none of the old charm of style of this Nestor of pediatrics. The author takes this opportunity of finally giving in his adhesion to the doctrine of the identity of croup and diphtheria; and, considering that he held the opposite opinion for nearly fifty years, it must be acknowledged that he deserves great praise for the sacrifice he has made.

Article 3333.

A Manual of Diseases of the Throat and Nose. By Morell Mackenzie, M.D.Lond., Consulting Physician to the Hospital for Diseases of the Throat, &c. Vol. II.—'Diseases of the Œsophagus, Nose, and Naso-Pharynx.'

This volume treats of the diseases of the œsophagus, nose, and naso-pharynx, and, with the first volume on the diseases of the larynx, pharynx, and trachea, forms a complete manual on the diseases of the throat and nose. Coming from an author of so large a practical experience of his specialty and knowledge of its literature as Dr. Mackenzie, it is needless to say how highly the work must be appreciated by all who are interested in the diseases of which it treats. Were further proof of its excellence needed, we think that the fact that Dr. Felix Semon has undertaken to translate it into the German would sufficiently testify to the high estimation in which it is held by those best capable of judging of its merits. The subject is treated in a thorough and systematic manner, and the work is enriched by a very copious and accurate bibliography. As a book of reference it will assuredly be found invaluable, and will no doubt take its place with the former volume as a classical work on diseases of the throat and nose.

Article 3334.

De la Cirrhose Alcoolique Graisseuse. Par le Dr. H. Gilson. Paris: J. B. Baillière et Fils. 1884.

Dr. Gilson is a pupil of Professor Lancereaux, and shares his master's conviction that the only true classification of cirrhosis of the liver is that upon an etiological basis, viz., alcoholic, syphilitic, and malarial cirrhosis. This doctrine dominates all that follows. He points out that the various attempts to classify these lesions by the size of the liver—hypertrophic and atrophic—by the arrangement of the new growth—unilobular and multilobular—or by the presence or absence of biliary canaliculi, have failed, by leaving out a large number which can only be classed as mixed cirrhoses. The lesion which he specially desires to describe, is that form of cirrhosis in which fatty metamorphosis of the parenchyma is present. This form is, he contends, specially associated with alcoholism. He gives ten cases, all but two collected from the publications of others, and upon them he ventures to put interpretations often at variance with those of the writers who have recorded them. If alcoholism is not mentioned or expressly denied, he gets over the difficulty by saying that these patients always are desirous to conceal their failing. Moreover, the cases appear to vary very much, some of them being instances of that rapid fatty atrophy which not uncommonly terminates cases of cirrhosis with symptoms like those of malignant jaundice. Even his own case is complicated by phthisis, in which the tendency to fatty degeneration of the liver has been well established, apart from alcoholism. The other original case has no

history. We should have been glad had the author waited to collect a series of well marked cases of cirrhosis in drunkards from his own personal observation, as these cases are by no means so rare, in this country at any rate, as to excuse this haste to publish his views on insufficient grounds. We have certainly observed the presence of fat to a marked degree in certain cases of cirrhosis in young children where an alcoholic origin was at least improbable. We agree in the main with his criticisms upon the recent attempts of the French school to classify cirrhosis on anatomical grounds. But we think that it would be difficult to bring all cases under the three heads to which he would restrict their etiology.

He is inclined to regard the fatty changes as being probably superadded at a later stage to the new growth of fibrous tissue, while at the same time he asserts that it is essentially alcoholic in its origin.

In a short note on the treatment, he mentions that Professor Lancereaux has been able to cure one case by milk-diet, iodide of potassium, and 'hydrotherapie,' and he suggests that these remedies are worth a trial. It is to be regretted that he does not particularise the nature of the last means. Unfortunately, many of us will be inclined to think that the use of water, to be really beneficial, should have been thought of earlier in the case.

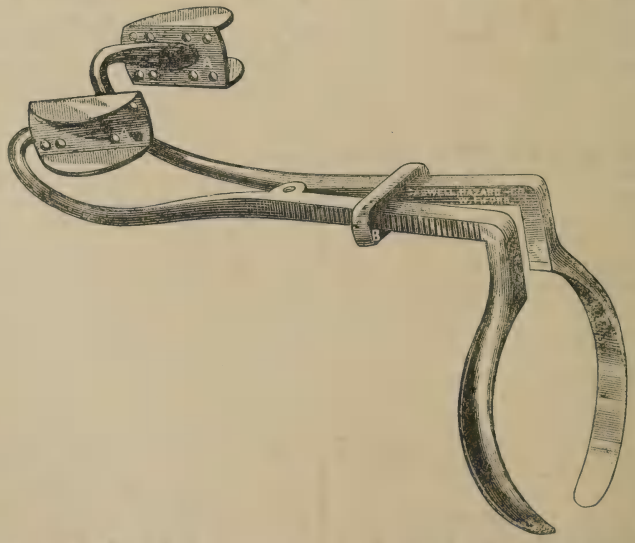
Robert Saundby, M.D.

NEW INVENTIONS.

Article 3335.

DR. D. H. GOODWILLIE'S ORAL SPECULUM.

Dr. D. H. Goodwillie, of New York, writes in the *New York Medical Record*:—'One of the most essential things in operations within the mouth is an oral speculum that keeps the mouth well open, is not in the way of the surgeon, and gives comfort to the patient.



'The above cut represents such an instrument as I have had made by Mr. W. F. Ford, of Caswell, Hazard & Co., and used with great satisfaction. I have used it in the operation of staphylorraphy in very young children, and it serves equally well in the adult. The tooth-cups, A A, are deep and long enough to embrace two molars. There is placed in them a small quantity of soft rubber, or, what has proved more useful to me, gutta-percha, as it can be warmed and the teeth and gums embedded in it. This gives a firm bearing and is very secure. The sliding-ring B holds it very firm against the teeth, and in an instant can be released by sliding it to the centre of the shaft, which lies close upon the cheek. By means of the handle, the head of the patient can be controlled by an assistant.'

Article 3336.

DR. CLINTON CUSHING'S NEW INSTRUMENT FOR TYING THE UTERINE ARTERY.

Dr. Cushing, Professor of Gynæcology in Cooper Medical College, San Francisco, California, writes as follows in the *New York Medical Record*.

In September 1881 I essayed the removal of the entire uterus through the vagina, on account of epithelioma of the cervix. At the outset of the operation, I undertook to ligate the uterine artery upon each side of the cervix, and between the cervix and the ureter, just above the vaginal vault. I used for this purpose a strong curved needle and a heavy needle-forceps, and was enabled, after several failures and much difficulty, to pass a ligature above the artery, and thus ligate it before any incisions were made in the tissue around the cervix. The operation was then carried out according to the original plan, without the loss of blood, and the operation was followed by recovery.

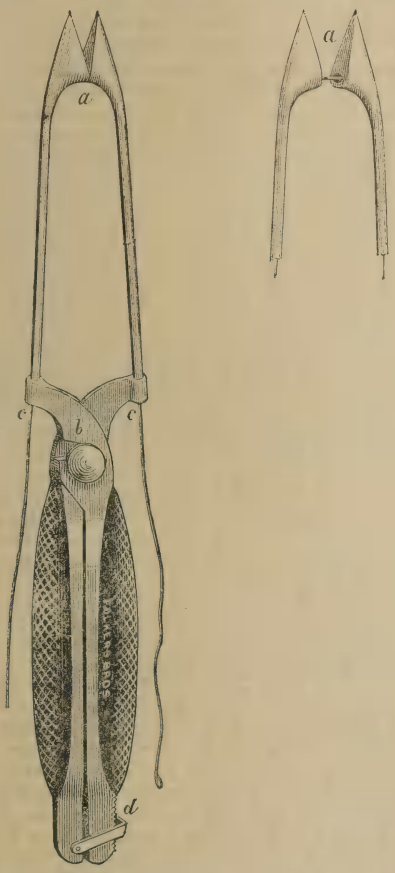
In looking over the literature of pelvic surgery, I was surprised to find no mention made of any plan by which the uterine artery might be ligated, whether for the control of hæmorrhage or for ablation of the uterus.

I at once began a series of experiments upon the cadaver, with a view of determining some method best suited to ligating the uterine artery from the

vagina, and without opening the abdomen. After making several dissections, I became convinced that the only point where the artery could be reached without endangering the ureter was midway between the body of the uterus and the ureter.

To understand clearly what I am about to say, it must be remembered that the uterine artery furnishes at least four-fifths of the blood-supply to the uterus; that it arises from the internal iliac artery at the point of its bifurcation, and passes inward along the lower edge of the broad ligament, and reaches the uterus just above the cervico-vaginal junction, where it sends off the circular artery of the cervix, and then passes upward along the side of the uterine body, sending off numerous tortuous branches to that structure, and finally anastomosing with the ovarian artery, an exceedingly small vessel.

The uterine artery is about the size of the radial, and can be felt with the finger through the roof of



the vagina in thin subjects, its pulsations being clearly perceptible. The ureter passes over the brim of the pelvis about one inch to the side of the promontory of the sacrum, and extends downward and slightly inward beneath the pelvic peritoneum, just external to the utero-sacral ligaments, reaching the connective tissue of the broad ligaments about three-fourths of an inch laterally from the cervix, where it passes behind and in close juxtaposition to the uterine artery. The ureter then passes forward between the bladder and the vagina, opening into the bladder about one inch in front and below the cervix uteri. In studying Savage's plates, one is led to suppose that the ureter is nearer the cervix than is really the case, as can be easily proven by passing a small flexible bougie through the ureter from the brim of the pelvis into the bladder, and then studying the parts *in situ*.

The accompanying cut represents an instrument that I have devised for the purpose of passing a ligature around the uterine artery from the vagina, without endangering the ureter.

As will be seen, each blade of the instrument consists of a small cannula, curved at its terminal end, so that when the blades are united and closed they form a half circle, and the two cannulæ when joined represent a closed tube from handle to handle. The end of each cannula is furnished with a trocar point.

The method of using the instrument is as follows. Place the patient on the left side and introduce a large-sized Sims' speculum; seize the cervix with a strong vulsellum, draw it down slightly, and steady it; now take one of the blades and pass it through the roof of the vagina a third of an inch to the side of the cervix, and a third of an inch back of the median line running from the cervix to the side of the pelvis; pass the cannula into the tissue of the broad ligament until the opening *a* of the cannula has entered one inch, keeping the point of the trocar within a half inch of the body of the uterus. Now introduce the other blade in front of the cervix and to the side in a similar manner, and close and lock the handles of the instrument, and the curved ends of the cannulæ come together in the connective tissue of the broad ligament above the uterine artery, and between the ureter and the uterine body. Now take a piece of steel wire, No. 23 gauge, made quite sharp at one end, and with a loop at the other for the attachment of a ligature, and pass it around through the cannula and draw the ligature into its place. The sharp end of the wire pierces any portion of the connective tissue that may become engaged between the ends of the cannulæ. The blades are now unlocked and removed separately, and the ligature is left in their track; and by tying it firmly the artery is perfectly controlled, and much the larger part of the blood-supply to the uterus is cut off.

The cut represented is one-half the size of the original instrument.

It has occurred to me that, by ligating these arteries in cases of uterine fibroids, their growth would be checked and atrophy follow, and I expect at some future time to report the results of the experiment. The ligation of these arteries, as the first step, renders ablation of the entire uterus comparatively easy to those who are practically familiar with this branch of surgery. Whatever the disease or operation that causes serious uteric hæmorrhage, this method of procedure may prove of service.

Article 3337.

MESSRS. SAVORY AND MOORE'S LIQUOR CINCHONÆ (PAUL).

The preparations of cinchona bark sold as liquor cinchonæ are mostly modifications of the one introduced by Battley fifty years ago. As the process by which they are made fails to extract the most important constituents of cinchona bark completely, these preparations do not represent the bark used in making them, and in common with the liquid extract of the British Pharmacopœia, they are

deficient in the most important constituents of cinchona bark, as shown by the following analyses of ten samples obtained from ten different makers.

Grains per Ounce.

	Solid Contents.	Total Alkaloids.	Quinine.	Cinchonidine.	Cinchonine.	Amorphous Alkaloid.
Good Calisaya bark contains	—	23·97	18·33	—	5·64	—
No. 1*	330	7·99	2·81	1·93	1·76	1·49
„ 2	133	8·09	1·93	0·35	1·67	4·14
„ 3	221	8·03	1·37	1·71	0·68	4·27
„ 4	188	9·94	0·27	0·44	2·55	6·68
„ 5	179	8·78	1·90	2·20	1·02	3·66
„ 6	178	8·60	trace	—	—	—
„ 7	133	5·63	2·73	0·53	0·26	2·11
„ 8	236	4·13	1·05	0·70	0·53	1·85
„ 9	48	2·34	0·59	0·14	0·29	1·32
„ 10	171	1·78	0·63	0·18	0·18	0·79

* This preparation contains a large amount of glycerine.

Thus the total alkaloid in one ounce of extract is never more than one-third of that in an ounce of good bark, and the quantity of quinine is not at the utmost more than one-sixth that in an ounce of good bark.

These preparations also have the defect of depositing 'a copious precipitate of a nauseous disagreeable bitter' when diluted with water, as pointed out on a recent occasion by Professor Redwood.

Another preparation, recently introduced, differs entirely from that of the British Pharmacopœia, as it is made with hydrochloric acid and glycerine, and consequently cannot contain the constituents of cinchona bark in their natural state of combination. Besides that, it contains only three grains of quinine in the fluid ounce, and it is too acid for dispensing with carbonates or iodides according to general practice.

Paul's liquor cinchonæ is made by a process that insures complete extraction of the medicinal constituents of bark in their natural proportions and state of combination, without introducing any extraneous ingredients, such as hydrochloric acid or glycerine. It is represented to contain a definite and uniform quantity of quinine and total alkaloid—viz., 24 grains per ounce, of which at least 18 grains is quinine, and is sold with Dr. Paul's certificate on each bottle. It bears dilution with water without forming any offensive deposit, retains the aroma of the bark and in every respect represents an equal quantity of bark.

It is therefore the cheapest preparation of the kind in the market, since it contains from six to more than ten times the amount of medicinal constituents present in other relatively low-priced preparations.

For medical practitioners who dispense their own medicines, it offers a convenient and trustworthy means of administering cinchona bark, and of obviating the trouble and waste involved in the preparation of infusion or decoction, since two drachms of the liquor diluted with a pint of water will make a better preparation than can be obtained as infusion or decoction in the ordinary way, while for hospital practice it ensures the further advantage of giving students opportunities for observing the effects of one of our most important drugs.

The process by which this preparation is made is an ingenious application of chemical science, and is the result of a long study of the subject, for which Dr. Paul has had special opportunities for several years while engaged in analysing cinchona bark for commercial and manufacturing purposes, a department in which he is held to be the chief authority both here and abroad.

Liquor cinchona under Dr. Paul's formula is prepared in England solely by Messrs. Savory & Moore.

MISCELLANY.

Unsuspected Lead-poisoning.—In the *Lancet*, June 1884, p. 1182, a letter appears giving the facts connected with two instances in which members of a household were attacked with marked signs of lead-poisoning. In both instances it was discovered that leaden pipes brought the water from the well to the house. The patients suffered for months without any sufficient reason being discovered for their illness, until the water was suspected to contain lead, owing to the characteristic blue line on the gums. Health was quickly regained after discontinuing the use of the water that passed through the leaden pipes.

Test for Abnormal Temperature of the Body.—Mr. Guthrie, in the *Lancet*, July 1884, p. 132, writes that he has recently observed that the organic base triethylamine varies remarkably according to temperature as to its solubility in water. Solutions of triethylamine in water are made of various strengths of from 5 to 12 per cent. of the alkali by weight. These are inclosed in glass bulbs hermetically sealed. All of these bulbs become turbid on being heated, but those containing most alkali require heating least. A series of bulbs is constructed: No. 6 of these becomes turbid at 91°·4, while No. 7 requires 98°·6, No. 8 requires 105°·2, and so on. This method may prove useful in detecting spurious temperatures.

Euthanasia for the Lower Creation.—In the *Asclepiad*, July 1884, p. 260, Dr. Richardson treats of methods by which the inferior animals can be placed under the influence of various new anæsthetics, so that they may be allowed to die a painless death. Two methods were experimented with: (*a*) the electric shock; (*b*) the administration of a narcotic vapour. The experiments with the electric shock caused that method to be put on one side, and the method of death by anæsthesia was extensively worked out. In 1878 the author constructed a chamber, in which sheep were introduced and rendered insensible by means of carbonic oxide gas. The chamber was capable of receiving two sheep at once, and the carbonic oxide was made by passing common air in a simply constructed stove over charcoal. The gas diffused through the chamber rendered the animals insensible in from one and a half to two minutes. When entirely unconscious, they were handed over to the butcher and killed in the usual manner. The flesh of animals thus killed is entirely unchanged, and is free from any trace of the gas. The paper then goes on to deal with the subject of applying this method to destroying animals suffering from disease, old age, injury, &c. At the Dogs' Home, at Battersea, Mr. Kenneth has generously contributed a large lethal chamber, in which about 100 dogs can be narcotised at once; and on May 15, 1884, Dr. Richardson put thirty-eight dogs to sleep, and finally to death, in this chamber, without any of them showing signs of distress or pain.

Disinfection by the Fumes of Sulphide of Carbon.—The combustion of this fluid being accompanied by the formation of considerable quantities of sulphurous and carbonic acids, M. P. Vigier has recently recommended its use for the disinfection of rooms and hospitals. Two or three litres of sulphide of carbon are placed in an earthenware jug and ignited. The room is then closed as hermetically as possible, and soon becomes filled by the fumes which, in all probability possess powerful germicide properties. Exact experiments have, however, not yet been made.

The London
Medical Record.

ARTICLE 3338.

FRERICHS ON DIABETES.

FRERICHS'S work on diabetes is summarised as follows in the *Centralbl. für die Med. Wissensch.*, No. 41.

The normal amount of *sugar* in the blood during life is put down at 0·12 to 0·33 per cent. As to *glycogen*, which is constantly found in the blood, in inflammatory exudations (where it is introduced with the white blood-corpuscles), in cartilage, the testes, &c., but most of all in the liver and the muscles, the author states that it may accumulate in the liver and muscles after any kind of nourishment, and asserts, in spite of failure of sufficient proof, that the sugar passing through the liver is converted into glycogen. The glycogenous degeneration of the kidneys in diabetes mellitus is mentioned as analogous to this. As to the combustion of blood-sugar, it is found to disappear completely some time after the removal of blood from the body, mostly by conversion to lactic acid ; but whether this process goes on within the body cannot be proved. The glycogen of the muscles is used up during their activity to form carbonic acid and heat. The conversion of liver-glycogen into sugar is regarded by Frerichs as a vital process. In the conversion of carbohydrates, the liver has thus a two-fold function : on the one hand, glycogen is formed and stored up within it from a part of the sugar brought by the portal vein; on the other hand, glycogen is converted into sugar, and carbohydrates are given back to the blood for the general needs of the vital processes.

There is no evidence at all of combustion of carbohydrates in the liver.

If the percentage of sugar in the blood exceed the normal, there is glycosuria. No special importance is attached to the still unsettled question of the constant presence or not of minute traces of sugar in the urine of healthy persons. Glycosuria is discussed most thoroughly, including the appearance, often only temporary, of small quantities of sugar in the urine. Three groups of such cases are given.

1. *Glycosuria after Poisons.*—It constantly occurs after poisoning by curare, carbonic oxide, amyl-nitrite, ortho-nitro-phenyl-proprionic acid, and methyl-delphinin. It occasionally occurs after large quantities of morphia, chloral-hydrate, hydrocyanic acid, sulphuric acid, mercury, and alcohol. Glycosuria after infectious diseases is allied to the above ; *e.g.* cholera, anthrax, diphtheria, typhoid fever, scarlatina, and malaria. In the last disease, it was only found once in several hundred cases. The appearance of a copper-reducing substance in the urine, observed by different authors after the introduction of various substances into the body, does not rest on the presence of sugar.

2. *Glycosuria from Digestive Derangements.*—While, as a rule, in healthy persons the ingestion of large quantities of sugar does not cause glycosuria, exceptional cases occur, in which even small quantities have this result. Apart from this, glycosuria is found occasionally in connection with gastric catarrh, especially in those who inherit a gouty disposition. It chiefly occurs during the intervals of gouty attacks. Experiments on the introduction of sugar in cases of phosphorus-poisoning, cirrhosis of the liver, and portal obstruction, gave only negative results as to the presence of sugar in the urine.

3. *Glycosuria from Nervous Derangement.*—This includes glycosuria after psychic excitation (persistent emotion, intellectual strain), neuralgia (sciatic, trigeminal, and occipital), cerebral disturbance (various injuries of the head and spinal column), and, finally, cerebral hæmorrhage and cerebro-spinal meningitis.

Diabetes mellitus is distinguished from glycosuria by the appearance of extensive derangements of the tissue-changes generally, which lead to general deterioration, to many local diseases, and usually to death. For the symptoms and complications we are referred to the original, especially as regards sudden death and diabetic coma. In speaking of the results of diabetes, twelve cases of cure are given. It often passes into some other grave disease—nephritis, diabetes insipidus, arterial sclerosis, and their consequences. But death is far the most frequent result ; and, of 250 fatal cases of the author's, 18 died from exhaustion, 34 from phthisis, 7 from pneumonia (4 of these with gangrene of the lungs), 8 from nephritis, 7 from carbuncle, and 9 from complications (6 of these from cancer). In all the other cases symptoms of cerebral paralysis appeared, in 10 from hæmorrhage, in 2 from softening, in 3 from cerebro-spinal meningitis, and in the rest from coma without local alterations within the skull. Fifty-five cases are reported, together with their necropsies.

Passing over the causes, immediate and predisposing, of diabetes, we come to the treatment, which is not so powerless as is often assumed, for the author has had cases under treatment for ten years up to eighteen years, and one case for twenty years.

A proper mental and bodily diet is of the greatest importance, and muscular exercise carefully conducted is most beneficial. Milk was found unfavourable, especially Donkin's treatment by skimmed milk. Many alkaline waters were found very useful (Carlsbad, Neuenahr, Vichy), when taken at these places. Amongst narcotics, opium is important, as it often lessens thirst, urine, and sugar, while the body-weight increases. As to the experience, usually negative, of many so-called specifics, lactic acid had no result, and glycerine was harmful. Salicylic acid, salicylate of soda, and iodoform deserve further trial. All weakening influences and cutaneous irritants are to be avoided.

The increase of sugar in the blood is the essential element of diabetes. By removing minute portions of liver during life, (by puncture, Ehrlich) it was shown that in advanced diabetes, the formation of glycogen in the liver gradually declines, so that the sugar absorbed from the portal vein passes directly into the systemic circulation. There is as yet no satisfactory evidence of lessened combustion of the sugar of the blood in this disease.

E. J. EDWARDES, M.D.

ARTICLE 3339.

VIRCHOW ON GOUTY NEPHRITIS.

VIRCHOW (*Berliner Klin. Wochensch.*, 1884, No. 1) disputes the current belief that gout stands in close relation to the occurrence of uric acid calculi in the

urinary passages. Renal and vesical calculi and sandy deposits are rare in the gouty (!) But it is not rare in his experience to find deposits of urates in most diverse parts in the bodies of persons who have never presented during life any distinct gouty phenomena.

Gout, therefore, may be latent, and this is generally the case among the poor. Virchow would admit two forms; that of the rich, with well-marked arthritic attacks, and that of the poor, in which these are absent, but which must not be confounded with arthritis deformans, often called 'poor man's gout.' He has only once seen deposits of urates, and the nodosities of this last disease in the same body. In gouty persons the kidney is often the seat of infiltrations of urates, not calculi. Ebstein has asserted that these infiltrations occupy the interstitial tissue of the kidney. Virchow has always found them in the tubules, principally in the medulla, in the middle part of the pyramids, more rarely in the peripheral part, or in the papillæ. Coincidentally there generally are deposits in other parts—*e.g.* the joints. The kidneys of gouty persons also present the alterations of interstitial nephritis described by Garrod; they are seated in the cortex, and give rise to cicatricial retractions. Between these foci, the renal parenchyma is healthy. Generally speaking, the epithelium remains healthy.

Virchow thinks the renal changes and the joint-affections are due, not to the deposit of urates, but to the irritation of blood loaded with urates. In illustration of this, he relates an observation made upon himself. After several slight gouty manifestations in his fingers, but without ever having had an attack of true gout, he was seized with symptoms indicating violent irritation of the urinary tract, with intense fever, and purulent urine. He was at a loss to account for this until he found, on adding acetic acid to his urine, when examining it with the microscope, that innumerable crystals of uric acid were formed. He immediately placed himself on an alkaline *régime*; the former symptoms disappeared, and the urine at the end of three months was quite normal. Evidently the urate of soda in solution in the blood and urine was the irritant.

There are sometimes in the kidney white calcareous deposits, which are regarded as formed of urates. They may be formed either in the walls of a tubule, or in its lumen. They may be complicated by the changes of interstitial nephritis.

ROBERT SAUNDBY, M.D.

ARTICLE 3340.

SEIFERT ON HYDROCHINON AS AN ANTIPYRETIC.

DR. P. SEIFERT, of Dresden (*Berliner Klin. Wochensch.*, 1884, No. 29), says that hydrochinon is a benzol derivative with the formula $C_6H_6O_2$, and is obtained by adding sulphurous acid to chinon. It crystallises in rhombic colourless prisms, is little soluble in water, easily so in alcohol and ether, and has a sweetish not unpleasant taste. It is isomeric with catechin and resorcin, and acts better than either.

Its physiological action was first determined by Brieger in 1879, on cold-blooded and warm-blooded animals. Small doses caused death with tonic convulsions in frogs. Rabbits bore quarter-gramme doses (3·8 grains) without inconvenience; half a gramme caused slight cramps; and three-fourths of a gramme caused strong clonic convulsions, the arteries being dilated, the salivary and lacrymal secretions increased, the temperature raised 2°·7 F., and the breathing retarded. Death ensued in an hour and a half.

A larger rabbit took 15½ grains, the usual dose for a human being, and recovered perfectly after clonic convulsions for two hours. The urine was always darkened, but contained no hydrochinon.

On man its antipyretic action is almost unfailing. It has been given in fifteen-grain doses up to even 90 grains in a dose. The former dose usually causes a lowering of 1°·8 up to 3°·6 F.; sometimes 5° or 6° F. The temperature begins to fall within a quarter of an hour, with sweating; it remains lower for two or three hours, and then rises during another hour to its former level. The pulse is slower but not altered in quality, the respiration is unaltered, the urine is darker. In continued fever, three or four doses a day of fifteen grains each suffice to keep the temperature at a moderate level of about 101°·3 F. No disturbing symptoms attend its repetition, as sometimes occurs after kairin.

Out of forty patients treated with hydrochinon, only four suffered from frequent vomiting, so that the remedy had to be discontinued. The noises in the ears, headache, and even delirium, which occasionally occur after quinine and salicylic acid, and the symptoms of collapse which occasionally attend large doses of kairin, were never observed. The only discomfort was a slight shivering while the temperature rose again. The sensorium was most favourably affected in the typhus patients, the mind becoming clearer.

The retardation of the pulse after each dose was parallel with the fall of temperature, and equally important. The recurring perspirations were seldom complained of; indeed, patients in high fever, with a dry tongue and burning skin, found great relief from them. But the drug is apparently contra-indicated in phthisis, with much tendency to sweating.

On children, the effect was equally favourable. Five grains are sufficient for a child two to four years old; seven grains for older children.

In conclusion the author sums up thus.

1. Hydrochinon deserves a place amongst our antipyretics.

2. Its action is certain and prompt, and, though its effect is not so lasting as that of quinine, its use in repeated doses is attended with no injurious effect on any internal organs, and fever may be kept down by it continuously and methodically.

3. It is especially recommended where quinine is not well borne, and its taste is as acceptable to children as to adults.

4. The price of 1 gramme is 40 pfennings (*i.e.* about 15 grains for 5*d.*), so that treatment by quinine and by hydrochinon would ultimately cost about the same.

E. J. EDWARDES, M.D.

ARTICLE 3341.

JOHNSON, CLARK, AND THOMAS ON ALBUMINURIA.

IN the *British Medical Journal*, August 1884, pp. 309 to 314, several papers on albuminuria, read at the annual meeting of the British Medical Association, are reported.

Dr. George Johnson introduced the discussion by

stating that the proximate cause of albuminuria may be stated, in general terms, to be either (1) some morbid condition of the blood, or (2) some mechanical impediment to the return of blood through the veins of the kidney. Dr. Johnson does not agree with the theory that albuminuria is the result of high arterial tension; for, in some cases of advanced granular kidney, where there is very high arterial tension, the amount of albumen is seldom great and often scanty, or even for a time entirely absent. He also insists that the smallest trace of albumen in the urine is always pathological; a frequently recurring or a persistent albuminuria is found sooner or later associated with serious structural degeneration of the kidney. It is, however, a fact that in many persons, apparently healthy, albumen may be found in the urine, not only in small quantities, but in great abundance, and this for periods extending over many months, and even years. The history of these cases is generally that they have suffered at some former period from acute renal disease, with or without dropsical complication. The longest interval the author has known between an attack of scarlet fever, with acute renal dropsy, followed by persistent albuminuria, and at length a fatal degeneration of the kidneys, with uræmia, is thirty years. It is important to remember that while the urine, which is passed before breakfast, and after a night's rest, is free from albumen, albumen may be more or less abundantly present after food and exercise. The author then goes on to speak of the phenomena of high arterial tension, with hypertrophy of the left ventricle, and doubling of the first sound of the heart, which occur constantly in the advanced stages of all forms of Bright's disease, except the so-called lardaceous degeneration of the kidneys. The explanation of the relation between the arterial tension and the cardiac hypertrophy is briefly explained. 'The smallest arteries are surrounded by circular fibres, which, under the influence of the vaso-motor nerves, regulate the size of their canals, and, therefore, the blood-supply to the various tissues and organs of the body. The contraction of these arteries lessens the flow of blood to the capillaries, and increases the pressure and tension of the arteries on the cardiac side of the obstruction. On the other hand relaxation of the arterioles permits a larger supply of blood to the capillaries, and lessens arterial tension.' Dr. Johnson then argues that hypertrophy of the left ventricle must be a result of forcible contraction of the muscular walls, rendered necessary by some impediment to the systemic circulation. This impediment is probably caused by excessive contraction of the muscular arterioles excited by the morbid quality of the blood, consequent on degeneration of the kidney. The theory of the existence of an active capillary force, by which the flow of blood is retarded or favoured, is entirely dispelled by the discovery of the muscularity of the arterioles. Dr. Johnson then refers to the controversy lately held at the Royal Medical and Chirurgical Society and asserts that the 'hyaline fibroid change' in the blood-vessels, and the 'arterio-capillary fibrosis' spoken of by Sir William Gull and Dr. Sutton, is altogether an error. It is stated that these distinguished observers, in their microscopic specimens, have mistaken the tunica intima, which is not at all muscular, for the muscular layer; while that which they describe as a quantity of hyaline fibroid substance, outside the muscular layer, is, in fact, the greatly hypertrophied muscular coat of the artery, whose texture has been rendered indistinct by the blurring influence of the glycerine, in which the specimens were mounted. The term 'interstitial nephritis' is also condemned, as in no form of renal degeneration are the changes in the tubes more constant than in the small red granular kidney, while the term implies changes in the kidney-structure which are intertubular. One of the main principles of treatment in cases of albuminuria is to lessen as far as possible the work of the kidneys, and to obtain for them physiological rest. Milk-diet is often most successful in recent acute cases. It will sometimes be found that, when the albumen has disappeared while milk alone is being taken, a small meal of solid food, fish, or poultry causes its reappearance.

Sir Andrew Clark (p. 312) deals with the subject of albuminuria in a clinical point of view. Cases are divided into those—(1) where the presence of albumen in the urine is non-renal, and (2) where it is renal in origin. Some of the causes of non-renal albuminuria are given—viz.: a serous fluid secreted from the vagina in women guilty of habits of secret personal impurity; in young men excited by sexual desire and denying its indulgence; in cases of eczema of the bladder; in the early stages of villous tumour, &c.

Cases of renal albuminuria are divided into those of functional and those of structural origin. Of the forms of functional albuminuria there are four worthy of consideration—viz.: the nervous, the oxaluric, the hepatic, and the gouty. The first two forms occur chiefly among adolescents, the latter two are found for the most part among elderly people. Sir Andrew Clark states that among twenty men entering a competitive examination no one was albuminuric; at the end of the examination, lasting a week, three were found to have albumen in the urine. It is also stated that if a case of 'oxaluria' be carefully followed out, sooner or later traces of albumen are found in the urine. Illustrations of the hepatic group occur for the most part in middle-aged men; and temporary albuminuria in gouty persons whose kidneys are as yet structurally unaffected is common enough, when the balance between ingoing and outgoing is disturbed, when the blood becomes loaded with excrementitious stuffs, and when there is increasing vascular tension, &c.

At page 313 Dr. Thomas treats of the etiology and management of albuminuria. Among the causes enumerated are—cold; alcoholism; mental worry; overwork; excessive eating; want of cleanliness among the lower classes, which causes the pores of the skin to be completely blocked up; also lead and gout. Dr. Thomas states that he believes that alcoholism has more to do with the production of Bright's disease than is usually thought. The common custom of taking alcohol in a regular way may not seem to produce harm, but sooner or later the day of reckoning comes. Many hard-working men are in the habit of taking what they consider a moderate amount of stimulants, from which they suffer no inconvenience as long as they continue their active labours, but the time comes when they give up some of their work and perform less exercise, but still continue to take the same quantity of stimulants; then it is that the kidney becomes blocked, and dropsy at last supervenes. Referring to treatment, it is recommended that one should first bear in mind that, in acute cases, the disease has been produced

by excessive work thrown upon the kidneys, and therefore they must be relieved as much as possible; the skin should be kept acting, the bowels well opened, and food given moderately only. In chronic cases, much good can be done if the cause be ascertained, and an attempt made to remove it as much as possible, such as seeing that no excess of food or drink is taken, that the mind is not worried, or the skin prevented from acting.

Drs. Haddon, O'Connor, and Myrtle, took part in the discussion after the paper; and Dr. Johnson, in his reply, stated that he knew nothing about eczema of the bladder, though he was familiar enough with inflammation and catarrh of that viscus. As to the cause of diphtheritic albuminuria, he believed it due to the poisoned blood, while the exudation in the throat was caused by the local action of the inhaled or imbibed diphtheritic poison.

RICHARD NEALE.

ARTICLE 3342.

STOLNIKOW ON THE IMPORTANCE OF THE HYDROXYL GROUP IN CERTAIN POISONS.*

THE important relations that have been established between the chemical constitution and the physiological action of organic combinations have taught us much. Thus, while the greater number of the bodies of the hydrogen cyanide type are poisonous and possess a somewhat similar mode of action, the methyl, ethyl, &c. cyanides are quite innocent. The entrance of the group NO_2 into benzol leads to the formation of the extremely poisonous body, nitrobenzol, $C_6H_5NO_2$; the same happens in the case of the poisonous bodies nitromethan (CH_3NO_2), nitroethan, &c.; and when the group NH_2 enters phenol, the poisonous body paramidophenol ($C_6H_4OH\,NH_2$) is obtained. On the other hand the entrance of the methyl group into strychnin, produces a much less poisonous body; and this has likewise been proved in the cases of brucin, codein, morphin, and nicotin. By substitution, it will therefore be seen that very important changes can be effected in the physiological action of certain chemical compounds.

As the results of Wilkowski's experiments on morphin, it has been established that, when it is given in poisonous doses, the functions of the cerebrum, corpora quadrigemina, cerebellum, and medulla oblongata are successively destroyed. The action of morphin, accordingly, is especially concentrated on the brain, the cerebrum being first affected. To the narcosis there sometimes succeeds a tetanic stage, characterised by an increased irritability of the spinal cord.

The author first describes how he prepared his morphin ether sulphate, $C_{17}H_{18}NO_2SO_4H.2H_2O$, and its tests. He next details a series of experiments on frogs, in which corresponding amounts of morphin and its sulphate were administered. While fatal results ensued in the case of the morphin, this did not occur with the sulphate. With the latter the voluntary movements became more abrupt and violent; then slight narcosis set in, preceded by a series of convulsive jumps which could be excited again to a certain extent by stimulation. By increasing the dose a tetanic condition was brought on, and this tetanus is a characteristic action of the sulphate which, accordingly, would closely ally it to the codein group. Morphin, $C_{17}H_{18}NO_2$ (HO); morphin-ether sulphate, $C_{17}H_{18}NO_2$ (SO_4H); codein, $C_{17}H_{18}NO_2$ (OCH_3). Codein we may regard as methyl ether morphin (Grimaux), and thebain as morphin-vinyl ether [$C_{17}H_{18}NO_2$ (OC_2H_3)]. By displacing the hydrogen of the hydroxyl group of the morphin by the ethyl group we obtain codethylin, $C_{17}H_{18}NO_2$ (OC_2H_5). This body acts like strychnin, and is more poisonous and possesses a stronger tetanising action than codein. In the morphin ether sulphate, the HO group of the morphin is exchanged for an indifferent group, and it is therefore less poisonous than either codein or thebain, in which the substitution group is not indifferent.

Again, morphin lowers the general blood-pressure and renders the heart-beat and the respiration slower. But the ether sulphate in question exerts no influence on the blood-pressure, and little or none on the pulse and respiration, unless given in very large doses. In men also a marked difference was noted between morphin and its sulphate; for, while 1-7th grain of the hydrochlorate caused sleep, a ten to twelve times larger dose of the sulphate had no effect.

Under the head of alterations of morphin in the organism, reference is made to the difference of opinion among different authorities as to the constant presence of this alkaloid in urine after its administration. In his experiments, the author could readily obtain the indications of morphin by the methods recommended by Dragendorff, Erdmann, and Husemann, when traces had been added to urine. He was also able to detect it readily by Fröhde or Husemann's reagents, or by means of ferric chloride, as well as by sodic phosphotungstate or phosphomolybdate, in the saliva of a patient to whom it had been administered. In experiments also with dogs, he obtained evidence of the discharge of morphin by the urine, but only in small proportion to that injected, as only the colour-reactions of morphin were obtained, but never the crystals. It is, therefore, possible that in its passage through the body the morphin undergoes change, and is excreted in the urine in an altered form. Indeed, when the morphin sulphate was administered, not a trace of it or of morphin could be detected in the urine.

The relation between the sulphuric acid combined with inorganic and organic aromatic bases was next investigated, and it was noted that the entrance of morphin and its sulphate into the organism increased markedly the quantity of the organic sulphates in proportion to the inorganic sulphates in the urine.

According to Baumann's researches, we learn that almost all the phenols are changed in the organism into aromatic sulphates; and if we regard morphin as being related to the phenols, then we can easily explain the increase in the organic sulphates of the urine. It would, in fact, appear that, when given regularly in small doses, morphin passes into the urine, but after large doses, on the contrary, even traces of it may not be met with in that fluid.

When carbolic acid is given in poisonous doses it is, as we know, quickly absorbed, and the animal soon loses its activity and passes into a soporific condition; but at the same time there is increased reflex irritability of the spinal cord, muscular cramps and even tetanus being readily induced; the cardiac contractions also are weakened, and the irritability

* *Zeitschrift für Physiologische Chemie.* Band viii., Heft 4.

of the nerves and muscles is diminished; the blood becomes fluid and reddish-blue in colour, the blood-pressure sinks, the small arteries are dilated, and the respiration becomes irregular and superficial. The author's experiments with frogs proved that phenolsulphonic acid, like phenol, is poisonous, though to a less degree.

Certain triatomic phenols were next experimented with. Pyrogallol or pyrogallic acid and a pyrogallol sulphonate were compared, and the former was found to act as a rapid poison in the case of frogs, while a corresponding dose of the latter produced a comparatively slight effect; the same result was likewise obtained with phloroglucin. Resorcin and its sulphonate were next compared; and, as before, the latter exerted a much less poisonous effect.

Lastly phloroglucin, $C_6H_3(OH_3)$, resorcin, $C_6H_4(OH_2)$, and phenol, C_6H_5OH were compared, and their relative activity as poisons was found to be in the order given, that is, closely related with the HO groups contained in them; for, if we displace these groups with indifferent sulphuric acid groups, this activity is correspondingly lessened, which we have seen also to be the case with morphin and its ether sulphate.

T. Cranstoun Charles, M.D.

Article 3343.

VON BERGMANN ON TRANSFUSION.*

The author begins by saying that physicians have always shown a disposition to investigation, sometimes for the sake of advancing knowledge, and sometimes for the sake of advancing themselves and making themselves known. Remedies have often been tried on organisms about which very little was known, and operations performed, the operator knowing very little of the parts operated on. Sound scientific knowledge on the part of physicians and surgeons should always go before practice. Mistakes are made to-day as much as ever they were. We who know how difficult it is to keep a liquid in a covered glass vessel free from corrupting bacteria, ought to admire the surgeon who tries to close up with wadding and bandages the wounds of his patients to secure them from suppuration. As yet no proceeding or bandaging has been invented that does not allow minute organisms to crowd through it, and still a series of brilliant successes are justly claimed by many surgeons of the present day. Surveying what has been discovered and put into practice, it is found that the present state of surgical knowledge has received no additions that have not flowed from the sure basis of biological knowledge. So long as we try to grasp the unknown, we only flounder about in error. By falling back on what is really known, these errors are corrected.

The author continues: 'I may be allowed to-day to explain what I have said by the example of an operation, which only a few years ago was praised as the most important in modern surgery, which would inaugurate a new "era in medicine," and do more than anything else to preserve the fleeting life of the wounded on the field of battle.'

The author then gives the well-known early history of transfusion from Medea and Jason's father down to Pope Innocent VIII., and continues: Thus, centuries before anyone had any conception of how the blood flowed in the body, before they had ascertained whither they should direct the current, they sought by this bold proceeding to find a channel for new blood. As it was the fashion to put blood in the place of life, spirit, and soul, so did people, the less they knew about blood, see in it all the wonderful properties and manifestations of life. No wonder, then, that in the seventeenth century, not solitary individuals, but learned bodies and colleges, occupied themselves with the question as to whether a dog could get wool and horns after receiving sheep's blood, and whether the disposition of a sanguine and hot-blooded person would become better through the gentle blood of a lamb.

These ignorant views and speculations extended to the eighteenth century, so that from the time of Medea to the time of Frederick the Great, when Mackenzie* thought it was possible to make the old young by transfusion, the study of the subject had not advanced. The introduction of the blood of an animal into the vascular system of another was almost in itself a proof of the circulation of the blood. It was carried out in many ways during the last century,† and established the fact that an animal that has nearly bled to death from an open artery can be brought back to life by transfusion of blood from another animal. That the experience gained from experiments on animals is applicable to man, has been maintained by judges like Hufeland, and also in a work of great thoroughness in the early part of this century by Dr. Scheel.‡ Transfusion, however, was rarely performed until the beginning of the second half of the century, when for a time the frequency of the operation increased to an extraordinary extent. When it is seen that from all the recorded cases and experiments one fact alone seemed to be well established, namely, that transfusion of blood can save a life threatened by rapid loss of blood, one would have thought that the operation would be confined to such cases; but the greater part of the operations were performed for various kinds of disease. Patients were bled to get rid of diseased blood, and to make way for new and healthy blood. Diseases of the kidneys, lungs, and stomach, pyæmia, typhus, and cholera were treated in this way. Again, we see that physicians strayed from the known to the unknown. Under such circumstances many fatal mistakes were made, and the operation waned in popularity until the successes of Martin of Berlin,‖ in lying-in cases, again revived it. The so-called successful cases followed each other rapidly, so that about ten years ago the operation reached its most flourishing stage, and stood forward as a panacea in all medical and surgical cases. One of its panegyrists cries enthusiastically 'Transfusion with animal's blood has created a new era in medicine.'§ Another sees in it that operation which the army surgeon should above all others make his own, an operation of more importance than bandages and ligatures of vessels.¶

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* Die Schicksale der Transfusion im letzten Decennium. A Survey of Transfusion during the last Decennary. By Ernst von Bergmann. Read at the celebration of the foundation of a Military Surgical Academy. Berlin: 1883.

* Mackenzie.—*History of Health and the Art of Preserving it.* Edinburgh. 17°o.

† Lower and Boyle.—*Philosoph. Trans.*, vol. i., p. 125.

‡ Scheel.—*Die Transfusion des Blutes und Einspritzung der Arzneien in die Adern.* Kopenhagen. 1802-1803.

‖ Martin.—*Ueber die Transfusion bei Blutungen Unentbundener.* Berlin. 1859.

§ Gesellius.—*Zur Thierblut-Transfusion beim Menschen.* Leipzig. 1874. S. 17.

¶ Malachio de Cristoforis.—La Transfusione del Sangue. (*Annali Univ. di Med. e Chir.*, Ottobre 1876.)

In the same year that these opinions were expressed, a congress of German surgeons was held, at which there was a discussion on the merits of transfusion. A well-known author said on that occasion, 'It was very easy to prophesy that the operation of transfusion would be carried in a sort of triumphal procession through all the hospitals.* How little has this prophecy been fulfilled! Ten years have not passed away since it was uttered, and we find that in Germany, as in England, the enthusiasm about transfusion has died out. The transfusion apparatus lies quiet, and the series of unquestionable indications for its use are one after the other given up. We begin to inquire, what grounds are there for such extravagant expectations and bold proceedings?

Our knowledge of the consequences of hæmorrhage, and of the changes which take place in the blood under various conditions, has been considerably increased in the last ten years, and with it has increased our insight into the mistakes which have been associated with the practice of transfusion. One theory was that, the blood-corpuscles being oxygen-carriers, every fresh bleeding called for a fresh supply of blood from without to carry on the work of sustaining life, and that this was one way in which transfusion did good. This assumption has turned out to be erroneous. When death is caused by sudden loss of blood, in consequence of injury to a large blood-vessel (a matter which occupies the army surgeon pre-eminently), it takes place whilst the body still commands a sufficient supply of blood-corpuscles to sustain life. This has been proved during the last decennium by experiments on animals, experiments which any one can repeat for himself.† In a great and sudden loss of blood, the arterial blood-pressure sinks so low that the movement of the blood is stopped. For a time the heart still works on, but ineffectually. It is like an empty pump, and ceases to draw and propel the column of blood. The various parts of the vascular system have become stagnant. Were the amount of blood which the vessels still contain put again into motion, it would be sufficient to support life. Hence, as Kronecker first pointed out, in such cases a simple infusion of a saline solution is sufficient to save life. By this means the contents of the vascular system become increased in volume—an increase which intensifies the intra-vascular pressure and re-establishes the working of the heart. Now we understand why in so many cases transfusion has saved life; why Lower's and Boyle's rudimentary experiments on dogs were successful. What was required was to fill the elastic tubes of the vascular system with a certain amount of fluid—not necessarily blood. Not merely by supplying blood, but in quite another way, is due the life-saving effect of transfusion. When it was supposed that the benefit to be derived from transfusion depended on new respiratory substances (bearers of oxygen) in the form of blood-corpuscles, the supposition carried with it the opinion that the blood-corpuscles of one individual would live and thrive in the vascular system of another; in other words, that they were capable of being transplanted.

The revival of transfusion somewhat coincides with the attempt to make amends for loss of substance by transplanting similar on dissimilar textures. Notably the results of Reverdin's transplantation of the skin support the idea that, if a part of a living organism be taken away and applied to another organism, it will live. Why, therefore, should not the red blood-corpuscles remain and thrive in an alien circulation, like the epithelium cells in Reverdin's little portions of the skin? To entertain this, we must forget that the epithelial cells in the 'rete Malpighii' are endowed with great vitality, which preserves their existence for days, whilst the blood-corpuscles are exceedingly perishable. For the confinement of the epithelial cells, a preparation of the place on which they are to be grafted is required—a vascular granulating surface. In transplantation of blood-corpuscles, the nourishing place is the current of blood in the vessels of the exhausted patient, and they are introduced before there is any capacity for assimilation and reproduction. All these considerations have been overlooked, and regard chiefly directed to the result—'resuscitation.' The result was thought to imply the continued existence of the transfused blood-corpuscles. It was so satisfactory, that it seemed unnecessary to test it by counting the corpuscles before and after the operation. For some time this counting was imperfectly done, even up to about ten years ago, when Malassez's method gave somewhat better results. When, however, observers, scarcely two years ago, began to count the corpuscles with an improved apparatus by Thoma and Zeiss, quite a different result appeared from what was expected. After every considerable loss of blood the proportionate number of blood-corpuscles remaining in the blood becomes less and less, and for a considerable time after the bleedings have ceased the diminution goes on, evidently due to some law connected with the physiology of the blood. Subsequently to the transfusion of such a quantity of blood as Worm-Müller and Lesser employed in their experiments, undoubtedly the blood-corpuscles seemed to be increased, but only for a time; very soon their number diminished, whilst the urea and alkaline elements of the urine, and the deepened colour of the latter, betokened the ruin and disintegration of the blood and its corpuscles, which had been conducted in excess into the system.*

The study of transfusion, however, was not advanced so much by the countings of blood-corpuscles, as by the results of the direct transfusion of animals' blood, which, supported by apparently remarkable cures of Hasse, became a favourite remedy. It seems scarcely credible how tenaciously physicians clung to this form of the operation up to the close of the last decennium, and that notwithstanding the cases one after the other must have convinced them of their great danger. After every transfusion with lamb's or dog's blood, the patients experienced rigors, high temperature, and the passing of urine containing the colouring matter of the blood.† First there is dyspnœa, followed by a feeling of being over-full, then sickness, and afterwards sinking and uncontrollable stool-pressure. There are also headache, dizziness, and even short periods of unconsciousness. From ten minutes to an hour after the transfusion a chill will set in, often increasing to a violent shivering fit, then a stage of heat, with

* Hüter.—Langenbeck's *Archiv für Klinische Chirurgie*, Band xii., S. 1.

† H. Kronecker und J. Sander.—*Berliner Klinische Wochenschrift*, 1879, No. 52.

* Sörensen.—*Undersögelser om Arvtallet rode og hvide Blodlegemer under forskjellige physiologiske og pathologiske Tilstande.* Diss. Kjöbenhavn, 1876.

† Hasse.—*Die Lammblut-Transfusion beim Menschen*, St. Petersburg, 1874.

very high temperature. After a few hours, or the morning after the operation, the urine is found of a blackish red colour, containing albumen and the colouring matter of the blood. Concerning the bloody urine, we now know what was only imperfectly known at the time of the foregoing experiences —that the hæmaglobinuria was the result of the dissolution of the blood-corpuscles in the moving current of the blood. We can scarcely understand to-day how observers in the face of so serious a disturbance of the human organism, and of the recorded experiences of Panum, could disregard the manifold dangers of transfusion with foreign blood. Their only apparent reason seems to have been, that one case after another of transfusion with lamb's blood appeared to be successful, or, to put it more exactly, that the patients did not quite die.

The injurious effects of transfusion with foreign blood were attributed by Prevost and Dumas to the unequal size of the blood-corpuscles in different kinds of animals. As the blood-corpuscles of a sheep are smaller than those of man, they were considered harmless. To Ponfick* must be given the credit of showing how mistaken this was. It is not the mechanism of the different sized corpuscles that makes foreign blood injurious, but rather important chemical changes in the blood, which when a certain quantity is transfused, makes the blood of a sheep a deadly poison to a dog, and *vice versâ*. There is an axiom that 'foreign blood is injurious, similar blood is not.' A complete answer has been given to the question as to what the harmfulness of foreign blood consists in ; and henceforth this kind of transfusion disappears from the stock of surgical remedies. Long before Panum pressed upon the attention of physicians transfusion with defibrinated blood, Magendie† had found by his experiments on animals that such blood caused diseased disturbances, such as quick breathing, diarrhœa with tenesmus, and bloody effusions into the peritoneal, pericardial, and pleural sacs. Accordingly, he warned the profession against its use. It is easy to understand why physicians did not altogether follow him, because in direct transfusion there are the numerous risks of coagulation attending the use of syringes and cannulæ. Virchow, in his works on *Thrombosis and Embolism*, did not in connection with transfusion set forth these dangers, or else he underestimated them. At the present moment, they form the principal objection to the only permissible form of blood-transfusion, namely, that with human blood intact. Physicians disputed the importance of Magendie's experiments, by maintaining that he had used the blood of animals whose corpuscles were larger than those of the blood-receiving animals. When this was found to be unsupported by facts, they said that the quantity of blood transfused was so large that it produced an universal plethora, causing diarrhœa and serous effusions. It happens that for nearly ten years we have known, from the measurings of the pressure of the blood by Worm-Müller and others in experimentally generated plethora, that injury from the increased pressure of the blood, which has been so much dreaded in transfusion, does not take place. Within wide limits, the vascular system accommodates itself to its increased contents, and adjusts itself to an enormous filling without any ill consequences. We are again brought to the point of considering how ready practitioners have always been, in connection with transfusion, to hasten on beyond the standpoint of their knowledge. The idea of plethora with increased blood-pressure after transfusion for the cure of certain diseases gave rise to the practice of bleeding the patient before the operation. Especially in treating septicæmia in this way, a large quantity of blood was taken from the patient in order that it might be replaced with new blood ; doubtless a double injury to the patient, first by the blood-letting, and secondly by the transfusion. These operations, nearly always fatal, proved the non-existence of increased blood-pressure as a cause of the fatal ending. Febrile agitations, diarrhœa, hæmaturia, and transudations which followed transfusion with animal's blood, were the results neither of the accumulation and embolism of the blood-corpuscles nor of the increased blood-pressure. Before we can understand the cause of these disturbances, we must increase our knowledge of the nature and physiology of the blood as it exists in actual circulation. The credit of having done this I will venture to ascribe to one of my best informed pupils. Arnim Köhler* first showed by experiments on rabbits that not only foreign but also similar blood is injurious. When blood is drawn from a rabbit by bleeding into a vessel, and then put back into the veins, the disturbances, that is, the symptoms of poisoning, are the same as when foreign blood is used. The animal is killed by its own blood. This experiment, the results of which were disputed at first, has been so often repeated that Cohnheim said, 'Everyone who has seen it will thenceforth entertain strong doubts as to the propriety of transfusing blood, with its probabilities of coagulation, as a blameless act.'† One need only draw 10 to 12 cubic centimètres of blood from the carotid artery of a rabbit, let it coagulate, press out the coagulated matter between linen, then filter and inject slowly into the same animal's jugular vein about 5 to 6 cubic centimètres of what remains, or by arterial transfusion into the femoral artery. The animal dies either during or soon after the experiment. It dies through extensive coagulation in its lesser circulation. If its chest be opened immediately, the heart is found to be full of tough coagulated matter, and the anastomoses of the pulmonary artery hard and swollen, and filled with dark red thrombi, which one can follow up into the smallest ramifications of the veins. The result of this experiment is an illustration of Schmidt's coagulation theory. When defibrinated blood is transfused, the fibrino-plastic element and the fibrine ferment find themselves free, and in this state they cause coagulation of the moving contents of the blood-vessels. To some extent the organism protects itself against this tendency to coagulation, and within certain limits is able to resist its effects ; but if the quantity of injected fluid be great, coagulation will take place. Köhler's experiments have proved still more. Everything which destroys the blood-corpuscles in the blood-vessels and sets their contents free, produces a vital ferment in the blood. This causes two things : first, extensive further dissolution and decomposition of the blood-corpuscles and coagulation of the blood ; and, second, smaller

* Ponfick.—Virchow's *Archiv*, Band lxxii., S. 1.

† Magendie.—'Leçons sur le Sang et les Altérations de ce L quide,' *Phénomènes Physiques de la Vie*, tome 4. Paris, 1838.

* Arnim Köhler.—*Ueber Thrombose und Transfusion, Eiter und septische Infection und deren Beziehungen zum Fibrinferment.* Dorpat, 1877.

† Cohnheim.—*Vorlesungen über Allgemeine Pathologie*, 1877, Band 1, S. 346.

disturbances—a certain amount of disorganisation of the blood—with which, however, the organism can still go on, and which it may overcome, but only amidst symptoms of a definite form of illness—those complex symptoms which Magendie has described as typical of transfusion with defibrinated blood, which Panum describes as typical of foreign blood, and which Köhler calls 'ferment-intoxication.' In order to bring about the dissolution of the blood-corpuscles in the current of the blood, it is only necessary to inject into an artery or vein of an animal large doses of Schmidt's blood-ferment,* or, as I have done with Angersen,† pure pepsin or pancreatin. The effects may then be watched: sometimes they are slight and soon over, sometimes severe and of long duration, and sometimes fatal. We can understand now why defibrinated bullock's blood has the worst effect of any, for its serum holds, as Schmidt has shown,‡ the greatest amount of ferment-contents. (The author here descants more fully on the dangers of using defibrinated blood, on the liability of the blood and blood-cells to various diseases, and on the propriety of restoring a blood pathology.) My intention (the author continues) has been to show in what way transfusion with defibrinated blood, similar and foreign, and even human, becomes injurious.

When transfusion with blood has saved life, it has been effected by setting the stagnated blood in motion, and not through any reviving respiratory action of the blood-corpuscles. It was, however, using a doubtful means, and it was only because small quantities were used that the patients survived the new danger as well as the old. When large quantities were used in febrile cases, septicæmia, &c., it was like pouring oil on the fire. The previous depletion practised in these cases increased the fibrine-ferment in the blood.‖ The ferment-contents of the blood rise after bleeding in a sheep from 1·4 to 2·7; in a dog from 7·1 to 28·5. This is a condition present in all cases of fever,§ and particularly in septic poisoning.¶ When under such conditions defribinated blood is added, with its additional fibrine-ferment, the avoiding a fatal result can only be exceptional. In fact, a large proportion of the septicæmic cases, where transfusion was employed, died a few hours after the operation; the others died later.** We owe it to two things that transfusion has so often passed off without danger, and has even been endured without much disturbance. The first is the small quantity (20 to 30 grammes) used. With this they tried to cure phthisis, chlorosis, and chronic intestinal catarrh. The second is the powers of resistance of the organism against the effects of the fibrine-ferment. If it were possible, an important point would be to determine the amount of resisting power the patient possessed. If, however, transfusion carries with it such dangers, we are forced to the conclusion that we are on the wrong track. All that can be effected by the operation can be effected by other and simpler means; namely, by infusing into the veins a solution of common salt. It has been established by numerous cases, and by cases in my own clinique, that when transfusion of a solution of common salt is used it revives the patient and causes the heart to beat. It is conceivable that a patient may be revived by something injurious; but if it can be done by something that is harmless, we should welcome it. There is only one kind of blood-transfusion that can really be justified: the transfusion of blood from the artery of one man directly into the vein of another. It is not for me to decide whether so much self-sacrifice from a fellow-creature would ever be popular. Nor need I dwell further on the dangers of coagulation, even by this method. (The author then dwells at length on the nature of the changes in blood caused by the various kinds of transfusion, especially the formation of hæmoglobin and fibrine-ferment, and their analogy with some forms of disease.) He then proceeds. Experiments have been made by other means than transfusion to convey fluids to the blood, but they have all proved abortive. When it became known that fluids are sometimes rapidly absorbed by the peritoneum, it was attempted to replace transfusion by filling the peritoneum with defibrinated blood. The lymphatics appeared to absorb much of the blood; but there was also produced a hæmatic icterus; and urobilin was found in the urine, proceeding from the absorption of the injected blood. These and other allied dangers, as shown by Angerer's and Edelberg's clinical and experimental researches, condemned intraperitoneal transfusion.

The paper concludes with very good advice about the importance of using, as far as possible, scientific methods in everything connected with the practice of medicine.*

[If the author's views were to be carried out, transfusion, with all its elaborate and ingenious apparatus, would become a thing of the past; but the simple operation of infusion with a saline solution would remain with us. Comparing the author's views with those of Professor Schäfer (who about five years ago made a valuable series of transfusion experiments for the Obstetrical Society) there are many points of agreement, particularly as to the use of foreign blood; but there is one very important point on which they differ. Professor Schäfer says that the benefit derived from transfusion is due to the fresh supply of blood-corpuscles as oxygen-bearers; whilst von Bergmann considers them for the most part to be only bearers of mischief, and attributes the good results (when there are any) to the mechanical effect of increasing the volume of fluid in the blood-vessels. If the latter be the true explanation, and the increase of volume can be effected as safely with a saline solution as with blood, the sooner such an important truth is established on a firm footing the better. Experiments have been made to show how long animals could be kept alive by daily transfusions only—that is,

* Köhler *loc. cit.* Birk.—*Das Fibrinferment im lebenden Organismus*, Dorpat Dissert., 1880.

† Von Bergmann und Angerer.—*Festschrift der Medicinischen Facultät zum 300 Jubiläum der Univers. Würzburg*, 1882.

‡ A. Schmidt.—*Pflüger's Archiv*, Band vi., 1872.

‖ Hüter.—*Allgemeine Chirurgie*, 1873, S. 644.

§ Bojanus.—*Experimentelle Beiträge zur Physiolcgie und Pathologie des Blutes der Säugethiere*, Dorpat, 1881.

¶ Edelberg.—*Deutsche Zeitschrift für Chirurgie*, 1880, Band xiii., S. 111.

** Bojanus.—*Loc. cit.*, S. 53. A ram, into a vein of which putrescent flesh-water had been injected, died in six and a half hours from putrid intoxication. In this animal the fibrine-ferment contents of the blood had risen from 1·0 to 20·0

* The following references are also given:—

Edelberg.—*Archiv für Pharmacologie und Experimentelle Pathologie*, Band xii., 1880, S. 283.

Angerer.—*Klinische and experimentelle Studien über die Resorption grosser Blutextravasate.* Würzburg. 1879.

Sachsendahl.—*Ueber gelöstes Hämoglobin im circulirenden Blute.* Dorpat Dissert., 1880. Speaks of transfusions with plain water and putrid fluids.

Ponfick.—'Ueber Hämoglobonämie und ihre Folgen.' (*Berlin. Klin. Wochensch.*, 1883, No. 26.)

Körber.—*Ueber Differenzen des Blutfarbstoffes.* Dissert. Dorpat. 1866.

without food—with the result of finding that the victims were slowly starved to death. The nourishment of the body can only be accomplished through its own chyliferous and absorbent systems. On the whole, there is a great deal to be said in favour of doing away altogether with blood-transfusion.—*Rep.*] HENRY M. MADGE, M.D.

ARTICLE 3344.

DUMÉNIL ON COLOTOMY IN THE TREATMENT OF VESICO-INTESTINAL FISTULA.

IN the *Revue de Chirurgie* for April 1884, Professor Duménil, of Rouen, reports a case of vesico-intestinal fistula treated by colotomy, and gives the results of a study of this and previously reported instances, with the view of estimating the value of this operation when thus applied. The patient in Professor Duménil's case was a woman aged 25, who for seven months before the date of the operation had passed fæcal matter chiefly by the bladder. There had been repeated attacks of abdominal pain, and much occasional disturbance in the functions of the large intestine from the time of her first confinement, seven years before the first appearance of fæcal matter in the urine. Colotomy was performed with a fairly successful result. The urine became almost normal in appearance, and was no longer painful. As fæces subsequently appeared from time to time in the urine, and the patient during each of these relapses suffered much from fever, an attempt was made, two months later, to close the opening of the lower part of the intestine. This operation was followed by local erysipelas, and afterwards by abdominal pain, vomiting, and other symptoms of peritonitis, and the patient died on the seventh day. This, the author thinks, is the first case in which a French surgeon has applied colotomy in the treatment of vesico-intestinal fistula.

Twelve other cases, collected from different sources, are analysed in this paper. Usually the fistula allows a ready passage of fæcal matter and of urine from one organ to the other; but in the author's case the opening, though sufficiently large to admit solid fæces, did not permit any flow of urine into the intestinal canal. This is explained by the supposition that there was a valvular formation at the vesical orifice.

Vesico-intestinal fistula, in most cases, causes death through exhaustion or extension of disease to the whole of the urinary apparatus. Cases are very rare in which the subject of such lesion has survived for any length of time. The gravity of the abnormal condition, and the rapidity of its evolution, will depend on the width and situation of the fistula, and the facility afforded to the passage of urine and fæcal matter. The existence of a fistula of this kind is incompatible not only with a long life, but also with any tolerable life. Several cases have been recorded of the spontaneous cure of a vesico-intestinal fistula. In most of the instances the symptoms indicated a small opening. It is important before deciding on colotomy to determine the seat of the intestinal orifice. In a large majority of cases it has been found in the rectum or the sigmoid flexure. The diagnosis will generally be facilitated by the history as to the origin of the disease affection, by the appearance of the fæcal matter contained in the urine, and by exploration of the organs. When the opening is situated low down, an examination may lead to the discovery of its seat. The injection of coloured fluid into the bladder may, it is suggested, render service in this respect. It is thought that in doubtful cases the proof of the existence of a communication between the bladder and the extremity of the intestine may be obtained by injecting a weak solution of yellow prussiate of potash into the rectum, and one of perchloride of iron into the vesical cavity. If there be a fistula between these organs, the characteristic reaction of these agents may be observed. In seven of the thirteen cases, colotomy was successful. There is often a tendency, however, even in the most satisfactory cases, to an occasional discharge of fæcal matter into the bladder. With regard to any attempt to close the orifice of the peripheral portion of the intestine, the author holds that such proceeding is likely to compromise the result of the colotomy. In conclusion, Professor Duménil states that, though colotomy, applied to the treatment of vesico-intestinal fistulæ, has hitherto afforded only the results of a palliative treatment, it constitutes a precious resource, which is capable of prolonging to a considerable extent the existence of patients with a very tolerable infirmity. It is still to be anticipated that the operation, either by itself or associated with other means, may, in favourable cases, bring about a radical cure.

W. JOHNSON SMITH.

ARTICLE 3345.

CORONA ON THE PARTIAL REGENERATION OF THE LIVER.

IN the May number of the *Annali Universali di Medicina* is a long and interesting original article by Professor A. Corona, Professor of Physiology in the University of Sassari, on the partial regeneration of the liver. After referring to the great activity of the school of experimental pathology in Italy, and instancing the discoveries of Tizzoni and Griffini as to the partial reproduction of the spleen, and of Paladino as to the reproduction of the ovarian parenchyma, he passes in review the labours of Colucci and Tizzoni on the partial regeneration of the liver, and those of Petrone on the same subject.

The principal conclusions at which Tizzoni arrived, are these. 1. The hepatic cells respond with very active proliferation to mechanical stimuli. 2. The reaction of these elements is not limited solely to the point irritated, but is also diffused to a certain distance from it; the reaction, however, gradually diminishing as the centre of irritation is receded from. By this multiplication there may take place in some circumstances a regeneration of the liver in correspondence with wounds of this viscus, and a new formation of hepatic cells and of biliary ducts beyond their normal limits. 4. The histological process of partial regeneration of the liver is identical with that of the new formation. 5. Experimental new formation of the liver takes place in the same way as the embryonal development of this viscus; that is, by the formation of hepatic cylinders (Lebercylinder of Remak), which, taking origin from the collection of hepatic cells pre-existing in very active proliferation, push themselves into the connective tissue, primarily uniting the margins of the wound, which may be formed by the adherent great omentum. 6. In the part of the liver regenerated and newly formed, a true and proper disposition of the acini is wanting, and the hepatic trabeculæ

have generally the same direction as the connective fibres in midst of which they are formed; they are then irregularly divided by septa of connective tissue in which run large blood-vessels, especially veins and large biliary vessels. 7. Histologically, the new formation of the liver, already completely developed, is identical in all its components (hepatic cells and biliary vessels) with the corresponding part of the normal liver.

Professor Corona, wishing to repeat the experiments of Colucci, operated on a number of dogs, and in three successfully removed a portion of the liver, the dogs afterwards regaining perfect health. These were killed 17, 43, and 26 days after the operation. Microscopic sections of the cicatrised liver showed very clearly proliferations of the hepatic cells; the contained nuclei varying extraordinarily in size, form, and number, but being larger than those of normal hepatic cells, and colouring more intensely with carmine. By the effect of the multiplication of the cells, cylinders or hepatic cords penetrating the cicatricial connective tissue are formed, and this process is well seen in the admirable plates which illustrate the paper. In plate I these projections into the cicatricial connective tissue of cords of hepatic cells of new formation are very visible. The facts observed by Professor Corona, before the publication of Tizzoni's researches, substantiate the latter's conclusions, especially as to the partial regeneration of the liver, and these are also generally confirmed by Petrone; but the new formation of the liver in the sense understood by Tizzoni he has not seen. Petrone holds with regard to the liver that, in destructive processes, especially if slow, there is a tendency to regeneration; that regeneration ordinarily takes place under the form of excretory tubes of embryonal aspect, with small biliary ducts; that the basis of the regeneration is the pre-existing epithelial elements, and not only those of the excretory tubes, but also the epithelial cells of the parenchyma, which show evidence of their multiplication in forming embryonal epithelioid accumulations, from which the regenerating tubules originate in a gemmiparous manner. The process of regeneration originating from the base of the local destruction, and the work of repair developing new blood-vessels and connective tissue, it follows that, when regeneration takes place slowly, more or less marked development of fibrous connective tissue, leading finally to cicatrisation, results. Colucci admits as certain the regeneration of the liver after partial removal; but, at least in the animals operated on by him, white rats, he admits also the constant hypertrophy of the remaining lobes, which attain the normal volume of the whole liver. But he differs from Petrone and Tizzoni as to the genesis of the hepatic tissue of new formation in the regenerative process. He denies that the partial regeneration of the liver takes place from the pre-existing cells, which, he says, do not participate in the process, and which at the surface of the wound are destroyed, their place being taken by leucocytes. The hypertrophy of the liver is due to dilatation of the blood-vessels, from which there is escape and emigration of leucocytes, which, finding outside the vessels conditions opportune for their ulterior development, become organised and differentiated, some into vaso-formative cells, others by direct adaptation into hepatic cells. Colucci's studies confirm the possibility of the cicatrisation of the liver with complete restoration of the removed parts; but Corona agrees with Tizzoni and Petrone in holding that the new formation of the hepatic tissue does not arise from the organisation and direct metamorphosis of the white blood-corpuscles as held by Colucci, but almost certainly from the proliferation of pre-existing hepatic cells, which when irritated respond to stimuli like many other tissues, and thus repair the losses suffered. Corona also disagrees with Colucci in not holding that, among the conditions for the complete regeneration of the removed hepatic tissue, it is necessary that the epiploon should not enter the wound. In two of his experiments regeneration took place, although the epiploon was adherent to the surface of the wound.

The conclusions of his paper are these. 1. Dogs bear well the partial removal of the liver, after which they may regain perfect health. 2. A regenerative process begins quickly in the wounded liver, the newly formed hepatic tissue being in some points complete seventeen days after the operation. 3. The regeneration takes place by a process of cellular proliferation of the pre-existing cells by nuclear multiplication.

After Corona's paper was written, Professor Griffini published his *Studio Sperimentale sulla Rigenerazione Parziale del Fegato* (*Archiv. per le Scienze Mediche*, Vol. vii., No. 18). In this paper, after referring to the above-mentioned works of Tizzoni and Colucci, he describes his experiments on dogs and rabbits, sixty-six operations in all, the animals being examined in from 24 to 128 days after the removal of portions of their livers. The principal facts observed after partial removal of the organ were—1. more or less hæmorrhage, never grave; 2. collateral hyperæmia and sloughing of the hepatic parenchyma of the margins of the wound, which a few days after operation was found with swollen dusky borders, sometimes containing a blood-clot, sometimes with the epiploon engaged in it; 3. proliferation of the interacinous connective tissue, and proliferation of the epithelium of the pre-existing bile-ducts. He describes minutely the simultaneous progress of these two proliferations, and the substitution of the young connective tissue for the coagulum or its fusion with the epiploon, as the case may be. In this connective tissue of new formation are found commencing cellular cylinders or cords in continuity with the interacinous bile-ducts, of which they are a simple prolongation. Large epithelial cell-cords, which subdivide quickly into small secondary branches, anastomose and form a network of large meshes. These cords of tortuous course do not allow the limits of the numerous cells which constitute them to be well seen: these are small, protoplasm, pale, or finely granular, with large nuclei, roundish or slightly oval. By examining the various stages of development, and by careful injections of the bile-ducts, Griffini proves that the epithelial cords originate directly from the pre-existing bile-ducts, the cells of which are in active proliferation, and which are all channelled from the beginning. In stages of more advanced development, the epithelial cells of the cords described, if not distinct at first, gradually enlarge; their protoplasm becomes granular, their limits more distinct, and they assume characters which approach them greatly to fully formed hepatic cells. As to the proliferation of the hepatic cells, Griffini notes that, in the first stages, when, that is, there is really old parenchyma in the margins of the wound, he saw no facts to prove it; on the contrary, in more advanced

stages in the newly formed parenchyma, he admits a true proliferation by which its trabecular system is completed. He declares, moreover, that no fact occurs favourable to the transformation of the white corpuscles into hepatic cells, as admitted by Colucci. He concludes that the process of partial reproduction of the liver finds a perfect comparison in the embryonal development of this organ, as he has already proved with regard to the partial reproduction of the spleen. G. D'ARCY ADAMS, M.D.

ARTICLE 3346.

FILIPPI ON CHOLERA.

PROFESSOR FILIPPI, in an interesting article (*Lo Sperimentale*, July 1884), gives an account of the most noteworthy current theories of cholera, as well as an outline of the symptoms, and some observations on treatment. Pacini's views have recently attracted much attention, from the fact that he preceded Koch in ascribing the disease to a specific micro-organism. Out of the innumerable forms of micro-organism formed in the intestines of cholera patients, Pacini selected as the specific cause one that especially attacked the bases of the intestinal villi and the absorbent epithelium, and led to the shedding of these structures. The microbe in question is a round, opaque, white molecule, one-thousandth of a millimètre in diameter. Pacini considered that the parasite acted in a purely mechanical fashion, and that it was devoid of infective or poisonous properties. In his opinion, it merely allowed the transudation of the watery portions of the blood into the intestines; while the injury to the absorbents prevented fluid from being taken up into the blood. This doctrine, it will be seen, differs materially from the view expressed by Koch, whose comma-like bacillus is endowed with infective (and perhaps with poisonous) properties, and whose primary action is consequently general and pathogenic, not local and mechanical.

In regard to symptomology, Professor Filippi lays much stress on the variety of symptoms met with in different cases. The first and most constant of the early symptoms is a suffocating sense of weight in the epigastrium; then there is weakness of the legs; after this occurs nausea and a feeling of seasickness; about the same time there is a cold clammy sweat, and this not unfrequently precedes the diarrhœa. Diarrhœa and vomiting are occasionally altogether absent, even though the bowels be full of liquid.

Emotional disturbance, fear, for example, powerfully augments the liability to the disease, as well as its virulence; and, in fact, the fulminant form of cholera is seldom found except when this cause has been at work.

Touching treatment, the recommendations of different observers are numerous and various. Pacini relied on ice given internally and applied to the abdomen, astringents, antiseptics, and absolute repose. The object of this treatment is to check transudation, and to kill the parasite. The injection of saline fluid into the veins was approved of only as a last resort. In addition to the ordinary remedies, Professor Filippi has used sinapisms and vesicants to the region of the stomach. Professor Bozzolo proposes thymol or thymic acid. As much as twelve grammes should be administered in the course of the day, one or two grammes enveloped in wafers or in capsule being taken at a time. It should not be given in solution; as, apart from the unpleasant taste of the drug, this would cause a burning sensation in the mouth and throat, though without injury to the tissues. The advantages that Professor Bozzolo claims for this drug, which he has already used with great success in the treatment of tapeworm and other intestinal parasites, are that it is highly antiseptic (parasitic), acid, only slightly soluble; it may be given even in large quantity without disturbing the functions of the stomach or bowels; and it is scarcely at all absorbed or altered in the stomach.

As a disinfectant for linen and for the excreta, a solution of corrosive sublimate (1 in 1,000) is highly spoken of. The importance of allowing the excreta to remain exposed to the direct action of some antiseptic for a little time, before finally disposing of them, is insisted upon.

Touching the communicability of the cholera to the lower animals, Professor Filippi has seen pigs devour the excreta of cholera patients, but has never known them contract the disease.

WILLIAM R. HUGGARD, M.D.

ARTICLE 3347.

EWALD ON DYSPEPTIC NEURASTHENIA.

THE following is the substance of the remarks made on the above subject by Dr. Ewald at the third Medical Congress (at Berlin), and reported in the *Berlin. Klin. Wochenschr.* of May 26.

Our attention should not be confined to the stomach, but should be directed with at least equal interest to the intestinal tract. In none of the patients suffering from the complex of symptoms embraced by the term 'dyspeptic neurasthenia' (or 'neurasthenic dyspepsia'), were intestinal troubles absent. These latter are not always severe, and there may be merely constipation, or diarrhœa, or insufficient absorption. But they may become very prominent, so as almost to constitute a separate class, as Cherchevsky has lately shown (*Revue de Médecine*, 1884, No. 3). There is severe abdominal pain, and the abdomen is not retracted, but distended by gases (flatulent dyspepsia). The general nervous symptoms are usually more severe than in the purely gastric form. Thus in this dyspepsia both stomach and intestinal tract are together affected, but usually not in an equal degree.

The term 'asthenia,' introduced by Brown and adopted by Broussais, indicates a condition of weakness of an organ, which is shown at first by morbid irritability, and afterwards by lowering of its functions. Thus the term 'dyspeptic neurasthenia' is better than 'nervous dyspepsia,' because the dyspepsia is then made a part of a general affection of the nervous system; but the latter expression is more popular.

The symptoms, of which none is special to the disease, but each of which may also occur when organic alterations are present, are mainly the following: a coated tongue, bad taste, dryness of mouth or else increase of saliva, foul breath, eructations, pyrosis, want of appetite, repugnance to food, ready satisfaction after ravenous hunger, inflation of the stomach by gases, restlessness (Kussmaul), meteorismus, &c.

Burkart has drawn attention to the fact that strong pressure in these cases in the situation of the great abdominal plexuses causes sharp pain; and he considers such spots analogous to the 'tender spots' of hysteria, inasmuch as these particular pains are only evoked by pressure, and are not to be confounded with subjective gastralgic pains. The author confirms this to some extent, but the symptom may be absent. Rosenthal mentions painful spots also along the spinal column, but these are still less constant.

Great weight has been laid on the general nervous symptoms, which may be hereditary or not, and are often very prominent. The intestinal neurosis is nearly always preceded by general (nervous) prodromata, which may also accompany it. Such are headache, toothache, weariness, a disposition to look on the dark aspect of things, an unnecessary gloominess, a saddened character of voice, &c. Weakness of memory, and inability to think collectively may go on to vertigo at times. The pulse is small and frequent, the hands and feet cold, and palpitation and dyspnœa accompany exertion. These latter symptoms may give rise to the greatest agony, as if death were impending, till eructations alter the scene.

All these symptoms are here purely nervous, and do not rest on palpable central nervous lesions, like the gastric crises of tabes dorsalis, or the gastric symptoms of diffused and localised cerebral lesions, or those occurring in chlorosis, menstrual derangements, uterine or ovarian troubles, or severe psychic excitation, as 'nervous diarrhœa' or constipation. All these differ from mild gastric neurasthenia in their severity and sudden development. Richter and Leyden have enlarged on such cases.

Professor Leube is inclined to regard so-called 'nervous dyspepsia' as a local disease of the stomach, but none of the chief recent writers on the subject think so. The dyspepsia is a symptom, and not a disease; no pathological changes in the stomach have occurred, in the ordinary sense of the term. Goltz has shown how slight irritation, normally without any effect, may cause severe gastric symptoms, in spinal and cerebral lesions.

The diagnosis is not always apparent. The long course of the disease, its original manifestations, the failure of local treatment, and the recognition of other neurasthenic symptoms, are its chief elements. The pains are less localised in character, and less connected with food, than in organic disease. Vomiting seldom occurs. The stools vary in character, and the author has not remarked the ribbon-like character of the fæces so much dwelt upon by Cherchevsky.

Leube gives the 'digestive experiment' as an aid in the differential diagnosis. This simply means that the stomach is empty seven hours after a meal, in health or in gastric neurasthenia, as tested by washing out. This is correct in the main, but too absolute.

Leube further states that 50 cubic centimètres of a 3 per cent. solution of caustic soda, injected into an empty stomach, are completely neutralised in twelve minutes, in health. This quantity contains then 3 grammes of soda (46·3 grains), and would require about 15·4 grains of hydrochloric acid. Assuming gastric juice to contain 2 parts of acid per 1,000, we should have to suppose that 250 cubic centimètres (more than 8 ozs.) of gastric juice were secreted in twelve minutes to neutralise only the half of this. Such a quantity is out of the question, and we can only suppose (if the fluids of the stomach be found neutral after the time given) that much of the alkali has been absorbed or has passed into the intestine. This, of course, destroys the value of the experiment. The stomach-pump should not be used when there is any suspicion of gastric ulcer. Violent peristaltic movements might cause perforation, apart from mechanical injury. Long observation is sometimes necessary to establish the diagnosis.

The prognosis and treatment follow of themselves. The former is uncertain, as in all neurasthenic affections. The milder cases are often the most obstinate, and *vice versâ*, but in the mildest cases the affection lasts for months at the very least. The treatment must be general, all local medication is idle to the purpose. The nervous system must be strengthened and calmed. The mind and body must be occupied, and both must be fed. Gymnastic movements or abundant exercise, and hydrotherapeutic measures, are valuable. The diet should be simple and sufficient. Trousseau said that the best *régime*, and the only one suitable, was that which the patient from his own experience could support best. It should, however, be unirritating. Sedatives are useful, especially potassium bromide in large doses, and, as tonics, quinine and arsenic, especially the latter. The English give belladonna in large doses, 0·05 to 0·1 gramme (¾ grain to 1½ grains), even up to 7·7 grains in a day, to overcome obstinate constipation depending on spasmodic contraction of the intestinal muscular fibres. Small doses should always be given first, to ascertain how the patient bears the drug. There are two drugs of especial efficacy, chloral in gastric hyperæsthesia, and opium when the irritation is chiefly intestinal. The former has a slightly antifermentative action, besides its sedative influence; and opium acts not only on the distension and flatulence, but often in an aperient manner also. 'Wind' is a potent cause of distress, and the constipation is often due to an obstinate contraction of the intestinal muscles. This latter is often easily overcome by opium, together with some mild vegetable aperient such as rhubarb, castor-oil, or tamarinds. Salines are to be altogether deprecated. They only irritate the intestine and increase the discomfort, and thus a vicious circle is set up.

As Gerhardt says of angio-neuroses; 'the physician, and not drugs, must heal the disease.'

In conclusion, Prof. Stiller, of Budapest, has just written a monograph thoroughly confirmatory of all the above. E. J. Edwardes, M.D.

Article 3348.

GODLEVSKY ON RUSSIAN BATHS.

In order to determine the influence of daily Russian steam baths on the healthy system, Dr. V. V. Godlevsky (*St. Petersburg Inaugural Dissertation*, 1883) made a series of careful observations on two quite sound and strong men, who, for the first ten days, daily took a simple vapour-bath, and then, after an interval of other ten days, daily took a vapour-bath, with rubbing and beating the skin by a *venik* (a bundle of birch-twigs with leaves).

The effects, as enumerated by the author, were as follows. 1. The pulse and respiration considerably increased in frequency. 2. The circumference and

excursion of the chest became somewhat larger. 3. The energy of expiration and inspiration decreased. 4. The capacity of the lungs decreased. 5. The axillary and rectal temperature rose. 6. The weight of the body fell considerably. 7. The volume of the limbs increased. 8. The circumference of the belly decreased. 9. The muscular strength of the hands lessened slightly, and that of the feet and abdomen considerably. 10. The daily amount of urine decreased, but its density increased. 11. The excretion of nitrogen was considerably increased, the increase lasting for five days after completing a series of baths. 12. The excretion of phosphoric and sulphuric acids also increased, but less considerably. The action of baths with the application of a *venik* is more powerful than that of simple vapour-baths.

The author thinks that vapour-baths administered daily for a certain more or less prolonged time may prove useful :—1. as a means of intensifying the process of metamorphosis in tissues; 2. as a powerful revulsive; 3. as a sudorific; 4. as a means of improving the action of the skin. Accordingly, Russian baths are indicated :—(1) in chronic muscular and articular rheumatism, as well as in gout; (2) in secondary and tertiary forms of syphilis; (3) in scrofula; (4) in obesity, and in plethora from overfeeding and sedentary life; (5) in the initial stages of catarrh of the nose, throat, bronchi, lungs, bowels, and bladder; (6) in chronic catarrh of the external auditory meatus (as recommended by Dr. Strom), the pharynx, tonsils, and nose; (7) in chronic inflammation of the spinal cord and its membranes (as recommended by Bartels, Frey, and Heiligenthal), and in hypochondriasis; (8) in chronic congestion of the liver, spleen, stomach, bowels, as well as in the algide stage of cholera; (9) in rheumatic, scrofulous, and syphilitic disease of bones; (10) in intermittent fever (in the stage of rigor); (11) in apyretic cases of ascites and serous pleuritis, and non-cardiac dropsy; (12) in hydrophobia (Sanjez, Buisson; Turkish baths in hydrophobia were recommended by Dr. R. Neale); (13) possibly, in diabetes, as well as (14) in the cases where the formation of biliary and cystic calculi may be suspected.

The contra-indications for Russian baths are as follows :—(1) all rather prolonged acute febrile diseases; (2) tendency to hæmorrhage; (3) general weakness and exhaustion after acute diseases; (4) acute affections of the eye and ear; (5) uncompensated diseases of the cardiac valves, fatty degeneration of the heart, arterio-sclerosis of higher degrees, and aneurism; (6) tendency to pulmonary and cerebral congestion, plethora of higher degrees; (7) considerable pulmonary emphysema, phthisis in the last stage; (8) obstinate constipation from atony of the intestines; (9) pregnancy with tendency to abortion; (10) very hot Russian baths are contra-indicated, also, in the cases of old people, and infants.

[Scientific investigations into the action of Russian vapour-baths on the healthy and diseased human system are as yet rather scanty. The following list of works on the subject is probably nearly complete. 1. Professor Spassky, 'On the Medical Value of Russian Baths,' *Voenno-Meditz. Jurn.*, Part xxvi. 1835. 2. P. T. Strakhoff, 'On the Russian Popular Vapour-Bath,' *Moskovsky Vratcheb. Jurn.*, 1856. 3. Zabelin, 'On Bathing,' 1856, St. Pet. 4. V. Znamensky, 'On Russian Baths in their Hygienic Aspect,' *St. Peters. Inaug. Dissert.*, 1861. 5. Carl Frech, 'Die russischen Thermaldampfbäder in Baden-Baden,' 1862. 6. Professor Bartels, in the *Greifswäld. Med. Beiträge*, vol. iii., 1865, pp. 39-50. 7. Geltovsky, in the *Arkhiv. Sudebnoi Meditz.*, vol. ii. and iii., 1869. 8. D. Velitchkovsky, in Manasseïn's *Sbornik Rabot*, vol. ii., 1877. 9. T. T. Stolnikoff. *Ibid.* 10. N. A. Zasetzky, 'On the Influence of Sweating on the Quantity of Hæmoglobine in the Blood,' *Voenno-Meditz. Jurn.*, No. 8, 1879. 11. N. A. Zasetzky, 'On the Influence of Sweating on the Digestive Power of the Gastric Juice,' LONDON MEDICAL RECORD, Dec. 1879, p. 501. 12. S. D. Kosturin, 'A Contribution to the Study of Russian Baths,' in Manasseïn's *Sbornik Rabot*, vol. iii., 1879. 13. A. Tartivel, 'Bain d'étuve humide ou de Vapeur,' in the *Dictionnaire Encycl. des Sciences Méd.*, p. 186. 14. S. M. Vasilieff, 'On the Influence of Spirit-inunctions on Perspiration,' *Vratch*, No. 13, 1883. 15. Professor T. R. Tarkhanoff, in the *Vratch*, Nos. 41-50, 1880. 16. L. T. Tumas, 'On the Influence of High Temperatures and Sweating on the Elimination of Drugs,' *Vratch*, No. 14, 1880. 17. S. T. Fialkowski, 'On the Influence of Baths on the Healthy and Diseased Eye,' *Vratch*, No. 9, 1881. 18. Frey and Heiligenthal, 'Die heissen Luft- und Dampfbäder in Baden-Baden,' 1881. 19. V. F. Strom, 'On the Influence of Russian Baths on the Diseased Ear,' *Vratch*, No. 8, 1882.—*Rep.*]

V. IDELSON, M.D.

ARTICLE 3349.

MEDIN ON TUBERCULOUS MENINGITIS IN YOUNG CHILDREN.

DR. O. MEDIN, of Stockholm, contributes to the *Nordiskt Mediciniskt Arkiv*, Band xv., Häft 4, an article on tuberculous meningitis in young children, founded on cases observed in the General Children's Hospital of Stockholm from 1842 to 1881. During that period, there were, among 5,410 deaths, 431 fatal cases of general tuberculosis, or about 8 per cent. This seems an unusually large percentage; but the proportion has not been of late so large as it formerly was. During the twenty years from 1842 to 1861, 299 cases of tuberculosis were observed in 2,679 deaths, or 11·2 per cent.; while in the twenty years, from 1862 to 1881, there were 132 cases of tuberculosis in 2,731 deaths, or 4·8 per cent. Tuberculous meningitis was found in 44 cases, being 0·8 per cent. of the total deaths, or 10·2 per cent. of the deaths from tuberculosis. Besides the 44 cases of tuberculous meningitis, tubercle of the meninges without meningitis was found in 23 cases, making in all 67 cases in which meningeal tuberculosis was found, being 1·24 per cent. of the total deaths, or 15·5 per cent. of the cases of tuberculosis. This does not, however, represent the frequency of the occurrence of meningeal tuberculosis unaccompanied by meningitis. For instance, in the ten years 1846–1855, there were 104 *post mortem* examinations of cases of tuberculosis, in 89 of which the head was opened; and among these meningeal tuberculosis without meningitis was found in 10 cases, and tuberculous meningitis in 13, making in all 23 or about 25 per cent.

Cerebro-spinal meningitis is of much more frequent occurrence than tuberculous meningitis. As has been stated in a previous paper by Dr. Medin (*Nord. Med. Arkiv*, Band xii., and LONDON MEDICAL RECORD, April and May 1881), during the period

from 1842 to 1876, there were 355 cases of cerebro-spinal meningitis among 4,973 deaths. Among the children in the hospital at Stockholm, ordinary cerebro-spinal meningitis appears to be more than six times as frequent as tuberculous meningitis.

As regards the influence of season of the year, most of the cases of meningeal tuberculosis (46 out of 67) were observed during the six months from February to July inclusive, and of these 29 occurred during May, June, and July. Of the 431 cases of general tuberculosis, 324 were distributed among the seven months, January to July, the greatest proportion (104) occurring during April and May. Hence the greatest frequency of general tuberculosis occurs one or two months earlier in the year than that of tuberculous meningitis. This variation, Dr. Medin suggests, may be explained in the following way. Of the many tuberculous children who die in the spring, a large portion die of intercurrent diseases, especially bronchopneumonia and capillary bronchitis; and in this case the tuberculosis has not been able to take such an extensive hold on the organism as when the child escapes the fatal complications and lives on into the summer. Again, in these latter cases, in which the tuberculosis has had time for its development, the meninges are more frequently affected. It is, however, possible, but not probable, that during the summer months various conditions arise, which cause the greater frequency of tuberculous meningitis. It is certain that symptoms of tuberculosis begin to appear two or three months before the outbreak of meningitis. It is probably the winter, with the impure air of imperfectly ventilated dwellings, that especially favours the activity of tuberculosis.

There is also a marked difference between the two forms of meningitis in regard to the age at which death most frequently occurs. In the former article on cerebro-spinal meningitis, it was shown that the disease occurred most frequently during the first month, and that there were many cases in the second and third months; after which the number in each month rapidly decreased, until at the eighth month it became very small. On the other hand, of the 67 *post mortem* examinations of cases of meningeal tuberculosis, only four occurred in the first three months of the infants' age; in the fourth, fifth, and sixth months the numbers were 16, 14, and 14; and after this there was a rapid fall. On the other hand, among the cases of general tuberculosis, the numbers are small in the first two months. The third month, however, begins to show an increase in the number of deaths, the greatest number occurring in the fourth and fifth months. It seems probable that tuberculosis seizes on the infantile organism at a very early date, but that the meninges are attacked with tuberculosis later than other organs. It appears also that children are more frequently attacked with tuberculosis of the meninges during the second quarter of the first year than during the remaining six months, the proportion to the cases of general tuberculosis being in the second quarter 1 to 4·5, and in the last six months 1 to 8·2.

In his former article on cerebro-spinal meningitis, Dr. Medin showed that the disease was more frequent in male than in female children, there being 149 of the former to 106 of the latter. In tuberculous meningitis, on the other hand, the proportions are nearly reversed, female children being apparently more predisposed to the disease. Of the 44 cases of tuberculous meningitis, 25 were in female and 19 in male children, while tuberculosis without meningitis was met with in 12 boys and 11 girls. The disposition to tuberculosis, however, appears to be similar in the two sexes: of the cases in which the sex was noted, 201 were in boys and 194 in girls. No absolute conclusion can be drawn from such small numbers as 25 and 19, but it may be regarded as certain that the proportion of the sexes in tuberculous meningitis is different from that in the epidemic form.

In speaking of the etiology of tuberculous meningitis, Dr. Medin says that it is of course identical with that of tuberculosis in general. The question however arises, whether the meninges may be primarily affected, or whether the disease is always accompanied by tuberculosis of other organs. The possibility of the occurrence of tuberculous meningitis in either way may be imagined. The infective matter of tubercle may enter the body at any point where there is an open communication with the outer world. As regards the meninges and the subarachnoid space, the researches of Key and Retzius have shown that they communicate with the outer world through the lymph-canals of the nasal mucous membrane, which canals communicate with the subarachnoid space. This mode of origin of the disease, however, appears to be very rare. In the 67 cases of tubercle of the meninges, there were only two in which the disease was confined to these parts, and was not found in other organs. On the other hand, meningeal tuberculosis is in the greatest number of cases accompanied by well-marked general tuberculosis of the thoracic and abdominal viscera. This was the case in 54 of the 67 *post mortem* examinations. In a few cases, only one other organ was affected besides the meninges; in one instance the liver, in another the mesenteric glands, and in a third the bronchial glands. In four cases, in three of which there was well developed tuberculous meningitis, tubercle was found in the lungs and bronchial glands.

As regards the symptoms of disorder of the nervous system, no appreciable ones were presented in cases of meningeal tuberculosis without meningitis. In some cases also, where tuberculous meningitis was discovered at the necropsy, there were no symptoms during life: for example, in a case of limited meningitis of the convexity of the hemispheres; and in a case of slightly developed meningitis, with very little effusion into the ventricles. In one case of perfectly developed meningitis in a child four months old, there were no symptoms during life.

The symptoms of tuberculous meningitis vary considerably in infants of tender age. In regard to them, Dr. Medin says it is impossible to establish a general type of the disease as for older children. From the moment when the first cerebral symptoms are observed until death occurs, the interval is generally from two to four days, sometimes ten or twelve days; in one case only the disease lasted an entire month; in another, death occurred at the end of thirty hours. There are no premonitory symptoms, as in children of more advanced age.

In giving a description of the symptoms, Dr. Medin compares tuberculous with epidemic cerebro-spinal meningitis. The former most frequently attacks children already affected with general tuberculosis; the latter frequently attacks healthy children. The commencement of the disease also frequently differs in the two affections: the former often begins

suddenly with convulsions; the latter, in general with somnolence, startings, change of colour in the face (transient redness), and characteristic hyperæsthesia. In the former, the type of the disease is dominated by clonic convulsions; in the latter, by somnolence and hyperæsthesia, by feeble convulsive movements accompanied by tonic spasm and, moreover, by intermittent exacerbations of the symptoms. Somnolence is not so frequent in tuberculous meningitis, the skin does not present eruptions, hyperæsthesia is rare, acute and piercing cries are not so frequent as in epidemic meningitis. Of disorders of the motor system, clonic spasm is the more common, tonic spasm is rare. Strabismus is a very common symptom. The pupils are sometimes contracted, sometimes dilated. Symptoms of paralysis are rare. Vomiting sometimes occurs at the commencement of the illness. Constipation is rare. Diarrhœa was present in several of Dr. Medin's cases. The fontanelle is often distended. The abdomen is never flattened or retracted.

The prognosis of tuberculous meningitis is, Dr. Medin thinks, always unfavourable. Medicinal treatment of all kinds has, he says, been without result; but prophylactic measures—that is to say, improved hygienic arrangements in the hospital—have had the effect of reducing the frequency and the mortality of the disease. A. HENRY, M.D.

ARTICLE 3350.

BARTH ON THE NERVOUS PHENOMENA OF DIABETES.

DR. BARTH (*L'Union Méd.*, Aug. 7, 1883) bases an interesting article on the recent thesis of Dr. Dreyfous, which deals with nervous symptoms met with in diabetes.

1. Affections of motion have been described since the time of Rollo. Loss of muscular power, stiffness, often resembling lumbago, and indisposition for exercise, are among the earlier symptoms. Later on, true paralyses appear, but these are transitory or partial. Hemiplegia and paraplegia may be seen, but more often the affection is limited to a limb or a group of muscles. They sometimes affect the tongue, the muscles of the eye, or the larynx. They are usually incomplete. Their duration is irregular, generally a few days, but they may return. Motor inco-ordination resembling ataxy has been observed; cramps and convulsions may sometimes occur.

2. Sensibility is often affected in the form of anæsthesia, generally in patches, rarely affecting the whole body. It is generally incomplete; not uncommonly neuralgia is associated with it. Cutaneous hyperæsthesia is frequent; the itching, which appears to be due to the elimination of sugar by the cutaneous glands, is well known. There are also thrills and painful tinglings on one side of the body. In some patients there is increased sensitiveness in the nape of the neck, or along the spine. Others complain of chilliness. Diabetic neuralgia has been often described; it is frequently bilaterally symmetrical, and resists all treatment except that by which the glycosuria is ameliorated. Gastralgia and angina pectoris are frequent. Impotence and loss of desire supervene early.

Troubles of vision are very numerous and significant; diabetic cataract, glycosuric retinitis, and more rarely atrophy of the optic nerve. Amblyopia without retinal lesions is also frequent, usually affecting both eyes, with or without lacunæ in the field of vision, sometimes accompanied by colour-blindness. [This form of amblyopia is held by many observers to occur only when the diabetic is also a large smoker of tobacco, and to be susceptible of great improvement by abstinence from tobacco. There seems good reason to believe that this view is in a great measure well founded.—*Rep.*] Graefe has seen hemiopia. The muscle of accommodation or the iris may be paralysed. The pupils may be contracted, dilated, or unequal.

Deafness is rare; tinnitus occurs sometimes. Anosmia is not very uncommon.

Among trophic disturbances may be mentioned urticaria, symmetrical gangrene of the extremities, and retraction of the palmar aponeurosis.

3. Intellectual apathy characterises the diabetic from the outset of his illness; he often suffers from perpetual somnolence. In certain cases, however, there is great irritability and insomnia; at times nocturnal delirium, which may go on to actual insanity. There may be intense fixed pain in the head, generally at the occiput; vertigo or syncope. The latter nearly always in relation to sudden *crises* of diarrhœa (Lasègue); also epileptiform or apoplectiform attacks coming on suddenly.

Finally remains to mention diabetic coma, first described exactly by Kussmaul. It supervenes without definite prodromata, some incoherence, epigastric pain, or vague malaise; sometimes the breath presents a peculiar odour resembling chloroform. No patient is free from the risk of it. Sometimes it occurs as the first indication of diabetes, sometimes only in the last stage of diabetic cachexia, sometimes in the course of a diabetes recognised and carefully treated. The symptoms come on rapidly, sometimes with colic and vomiting (Schmitz), or pain like peritonitis (Jaccoud), or choleriform diarrhœa (Buhle and Tappeiner), or it may be only complete prostration. But the principal phenomenon is the violent dyspnœa, characterised by deep inspiration and expiration, rapid and regular without intermittence, as in uræmia. There is no orthopnœa. The patient is incapable of moving, the pulse is small and frequent, the tongue dry and black, the extremities cold. The urine, when not suppressed, gives the same odour as the breath. The coma soon becomes complete, sensibility and mobility are abolished, respiration becomes stertorous, the temperature falls rapidly; and the patient succumbs at the end of twelve to forty-eight hours, without the occurrence of any convulsive phenomena.

[The severe gastro-intestinal symptoms given above are exceptional in the reporter's experience. The peculiar odour of the breath and urine is also far from constant. Convulsive phenomena do occur towards the close of the scene in a certain number of cases.—*Rep.*]

4. What is the nature of the agent which produces these various nervous phenomena? Griesmeyer, Busch, and Wunderlich think it is due to uræmia. Such a view can hardly be maintained in the face of the great clinical differences between classical uræmia and the symptoms above described. Kussmaul has contended for acetonuria, and his view has many partisans; but the experimental evidence for and against the power of acetone to produce such symptoms is very conflicting. Sanders and Hamilton have suggested fat-embola of the lungs and brain as affording a satisfactory ex-

planation of the dyspnœa and collapse, but the existence of these embola have not been sufficiently proved, and they certainly are not present in all cases. Bouchard attributes all the symptoms to dehydration of the tissues, as a consequence of the hyperglycæmia: hence the frequency of coma after profuse sweats and attacks of diarrhœa. The authors think the glycæmia is in itself a sufficient cause. The sugar in the blood prevents the proper nutrition of the tissues, so that any unfavourable accident finds them prone to manifest morbid phenomena. ROBERT SAUNDBY, M.D.

ARTICLE 3351.

PEL ON A REMARKABLE CASE OF EMPYEMA.

DR. P. K. PEL, of Amsterdam, reports (*Berliner Klin. Wochensch.*, 1884, No. 8) a remarkable case of empyema. On Jan. 1, 1884, the pulse was 116, soft, full, and regular; the evening temperature 101·3; respirations 48. The left side of the chest was expanded, moving very little on respiration. The intercostal spaces were obliterated. The percussion-note was everywhere dull, except near the lower border of the ribs, where it was tympanitic. The heart's dulness could not be defined above or to the left, but to the right it extended one centimètre beyond the right edge of the sternum. The breath-sounds were absent over the whole of the left side, except under the clavicle, where bronchial breathing was audible. Vocal fremitus was absent over the whole left side, also bronchophony, except above the third rib. In the left supraspinous fossa the breath-sounds, vocal fremitus, and bronchophony were present. The right side of the chest was normal. The heart-sounds were pure, not muffled, loudest at the right edge of the sternum. The liver and spleen were normal, and the urine free from albumen.

The patient complained of fever, weakness, oppression of the chest, and cough, without expectoration. A diagnosis of left empyema was made, and after an exploratory puncture, which drew off pus, an incision was made in the eighth interspace in the posterior scapular line. After the operation, the pleural cavity was carefully washed out, and antiseptic dressings were applied. This operation failed to relieve the patient. The quantity of urine increased, the pulse ranged from 100 to 120, the respirations 40 to 48, and the evening temperature reached 104°. The nights were very bad. On Jan. 7, a decided bulging forward was observed over the cardiac area from the third to the fifth ribs. No cardiac impulse could be felt. The percussion of the cardiac area showed absolute dulness from the upper border of the third rib downwards, to the right to two centimètres beyond the right edge of the sternum, to the left to three centimètres to the left of the mammillary line, and about two centimètres beyond a spot at which feeble undulations could be perceived. The shape of the dull area was triangular, with blunted angles; it did not change with the position of the patient, and was limited to the left by a tympanitic percussion-note. No friction-sound could be heard over the heart. The heart-sounds could only be heard with a binaural stethoscope, but were pure. To the right of the dull area there was loud respiration, to the left indeterminate respiration.

On the ground of, 1, the shape of the dull area; 2, the bulging of the præcordia; 3, the scarcely audible heart-sounds; 4, the feeble undulatory movement in the fourth interspace; and 5, the character of the pulse, the want of harmony between the weakness of the heart-sounds and the fulness of the pulse, a diagnosis of pericardial exudation was made, which, from the condition of the patient, the fever, pain, and bulging of the cardiac area, and the presence of purulent exudation in the left pleura, was regarded as purulent. After a preliminary puncture, which withdrew pus, no impulse being given to the needle when pushed home, an incision was made and about two litres of pus escaped. On introducing the finger, the heart could be felt beating in the cavity. The fulness and tension of the pulse and the intensity of the heart-sounds improved after the operation. No change in the physical signs occurred after this. The patient developed symptoms of peritonitis and septicæmia, and died on the evening of Jan. 10, three days after the operation. The necropsy showed adhesion of the parietal and visceral layers of the pericardium, *which had not been opened*; the pericardium was as thick as a finger. The left pleural cavity was divided into two cavities, one posterior and inferior, bounded above and in front by the adherent and collapsed lung, and the other bounded in front by the wall of the thorax, posteriorly and towards the middle line by the pericardium, and above by the left lung. This cavity lay in front of the heart, and had simulated by its physical signs an exudation into the pericardium. Dr. Pel believes that this error in diagnosis could not have been avoided, and that it proves the necessity of recognising the possibility of such a source of fallacy. ROBERT SAUNDBY, M.D.

ARTICLE 3352.

BRICON ON THE HISTORY OF THE MICROBE OF SYPHILIS.*

DONNÉ, in 1837, said, 'the tendency to explain the propagation of contagious diseases by the existence of certain animalcules charged with a deleterious principle is, as is well known, very general,' and he recalled the fact that Cullerier believed in the existence of special animalcules in syphilitic ulcers. Donné gave later a description and a drawing of a parasite often met with by him, which is no other than the *vibrio lineola*, already described by Müller, which he did not regard as specific, but as 'purely accidental.' Hallier in 1869 notified the presence of micrococci in the blood of the subjects of constitutional syphilis. They penetrate the blood-corpuscles, forming vacuoles.

Klotzch in the same year found spores in syphilitic patches, and in the scales of syphilitic psoriasis. Salisbury and Brühlkens also attributed syphilis to a parasite. Lostorfer also described brilliant round corpuscles in syphilitic blood, but his observations were disputed by Wedl. Vaida found the same bodies in the blood of leukhæmia and cancer, and he satisfied himself that they were of an albuminous nature, and not vegetable parasites. Biesiadecki came to the same conclusion, and observed that Stopczanski had already taken Lostorfer's corpuscles for granules of paraglobuline.

In 1878, Cornil appeared to have accepted the parasitic theory of syphilis.

In the same year Klebs published his researches

* *Le Progrès Méd.*, 1884, Nos. 37, 39, and 41.

on the contagion of syphilis. This observer succeeded in inoculating two monkeys with culture-fluids prepared with pieces of excised hard chancre. The first monkey presented ulcerations like those of syphilis in the mouth and on the gums; the second was attacked with a papular eruption. Nevertheless, the absence of any initial lesion, and at the necropsies the absence of any syphilomata, are noticeable.

Also, in the same year, Cutter, of Boston, announced the presence of mycelia in syphilitic chancres. The leucocytes in syphilis increase in size, and the blood contains bacteria and filamentous elements. Bermann, of Baltimore, also attributed this disease to specific organisms.

In 1881 Aufrecht, of Magdeburg, described a micrococcus in syphilitic papules, which was often double and sometimes in chains. They were well coloured by fuchsine, and could be found in the serosity which exudes from a papule after scarification and the cessation of the hæmorrhage.

Obraszow found colonies of micrococci in the lymphatic glands near hard chancres. They were also found in the swollen glands in the neighbourhood of chancroids, but in smaller numbers.

In 1882 Birch-Hirschfeld found micro-organisms in all gummata, especially in the granulation-tissue at the periphery; also in mucous patches, hard chancres, and papular syphilides. He failed to find them in the blood of a patient with recent roseola. These organisms were oval, and usually single micrococci; they were rarely met with in chains of four or five. Peschel has described the same organisms.

On September 5, 1882, Martineau communicated to the Paris Academy of Medicine the result of his experiments made in conjunction with M. Hamonic. They inoculated young pigs with a culture-fluid in which a hard chancre, excised from the labium minus of a woman, had been allowed to remain for twenty-four hours. This fluid contained two species of bacteria, and also certain micrococci. The day after inoculation they found the bacteria in the blood of the pig. A month later, a papulo-squamous eruption appeared. In a second case they found bacteria in the blood four days after inoculation, and a papular syphilide on the fourteenth day. The bacteria from the blood of these two pigs, cultivated and inoculated in a pig and a goat, gave only negative results. Koch considers these experiments of more than doubtful value. On November 16 of the same year Martineau inoculated a monkey with the liquid from a hard chancre, by making three punctures on the prepuce with a vaccination needle. Twenty-eight days later, the monkey presented two chancres having all the appearance of the classical hard chancre; in September 1883 the monkey had a syphilitic ulceration of the hard palate, which lasted three weeks; on October 21 some epileptic attacks, which lasted four or five minutes; and finally, on December 3, a hypertrophic papular syphilide on the right half of the scrotum. On January 18, 1884, there was a new papular syphilide of the palate, which lasted fourteen days. Since, the monkey has enjoyed good health, and appears to be cured.

Letnick has obtained only negative results with his inoculations of pigs and rabbits, although he has found a micrococcus constantly present in all the syphilitic lesions which he has cultivated. Kobner, Neumann, and Bayer were not more fortunate in the attempts with rabbits, dogs, pigs, goats, monkeys, &c. Horand and Cornevin seem to have shown conclusively that the pig is not susceptible to the virus of syphilis.

Hänsell's experiments, made by introducing pieces of mucous patches into the anterior chamber of the eyes of rabbits, have not been more decisive. Cognard believed that he succeeded in inoculating a monkey with the cultivated secretion of a mucous patch, but Dion and Horand regarded the phenomena as due to septicæmia.

Petrone has unsuccessfully inoculated twenty-four animals beneath the ocular conjunctiva with fragments and secretion from hard chancres.

Lemcke's experiments on sucking-pigs were also without result, although the animals were kept for six months under observation.

Leistikow's histological researches on the subject of syphilitic bacteria were also negative.

Morison has succeeded in demonstrating the existence of bacilli in the secretion of hard chancres and mucous patches. In the pus of soft chancres quite different organisms could be seen; these were longer and more slender, more resembling those of anthrax, but smaller. The examination of the blood of healthy persons, and those affected with eczema, pemphigus, &c., gave generally negative results. Morison hesitates to pronounce these bacilli identical with those described by Birch-Hirschfeld, Martineau, and Hamonic. In a more recent work Morison says he has found the same organisms in eczema impetiginosum and acne.

Neisser regards syphilis as due to the development of specific micro-organisms.

Barduzzi has seen numerous micrococci and bacilli in the fluid of a bulla of syphilitic pemphigus.

Tornery and Marcus have cultivated the secretion of hard chancres and mucous patches, and have isolated a micrococcus which they regard as the specific organism of syphilis, but they do not appear to have tried to inoculate the culture-liquid on either men or animals. Diday is a partisan of the parasitic theory, and Leloir has for some years pursued a research on this line.

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Robert Saundby, M.D.

Article 3353.

DE GIOVANNI ON INDIAN CHOLERA.

According to Dr. de Giovanni, the differential diagnosis of cholera is easy on paper, but not to be made by the bedside. Cholera nostras does not differ clinically from Asiatic cholera. It is said that the comma-bacillus is not to be found in the first, but this is not yet certain. Fuchler and Prior and other observers are said to have found the bacilli in cholera nostras; and Professor Maggi, of Pavia, has found the comma-bacillus in the stomach of animals during the period of digestion. In epidemic years, not only cholera nostras but ordinary diarrhœa must be looked on with suspicion. In such circumstances, either the patient comes from an infected locality or has been in contact with persons or clothes brought from thence; if neither of these be the case, there is no question of Asiatic cholera. The present epidemic, like all its predecessors, shows that man carries the morbific germs.

Until the natural history of cholera is better known, it is not wise to adopt any theory as to its being only epidemic or contagious. It is certain that, besides contagion, there is an influence relative to the locality or season. Some places have always escaped. Cholera is always more frequent in the summer, less so in the autumn and spring, and very rare in the winter; it is favoured by heat and damp; it is more frequent in low sites, and the mortality is in inverse ratio to the elevation of the soil. De Giovanni agrees with Hirsch in maintaining that an epidemic of cholera, like that of other contagious diseases, is not developed unless all the necessary conditions concur, besides the presence of contagion. There must be a disposition of time, of place, besides the individual disposition.

It is very important to recognise the disease in the prodromal period; this may be very short, but may be prolonged for six, twelve, or twenty-four hours. The usual symptoms are, general malaise with a more or less painful sense of oppression in the epigastrium, weakness of the extremities, expression of anguish or anxiety, frequent contracted pulse, &c. Sometimes these prodromal symptoms are less characteristic. There may be insomnia, vertigo, nausea, loss of appetite, flatulence, or slight malaise, noise in the ears, shivers followed by sweating, with general weakness, torpor of mind, and sense of intoxication like that caused by inhaling carbonic acid, or symptoms of dyspepsia, unaccustomed irritability, &c. De Giovanni asks if these symptoms, recalling those which are accustomed to precede the invasion of all infective diseases, can be explained by the presence of bacillus in the intestine. They can be explained by the hypothesis of Koch, and of Namias and Zennaro on the discovery of Pacini, of a special poison developed by the organisms.

Leaving theory aside, the author in such cases prescribes absolute rest in bed, milk and broth diet, naphthalin or thymol given before food. Naphthalin may be given in doses of 15 to 20 centigrammes four or five times a day; this quantity may be increased, if it be well borne by the stomach, to even 2 or 3 grammes a day. Copious enemata of boiled water, acidulated with 2 per cent. of hydrochloric acid, should be given. The action of the skin at the same time is to be encouraged by diaphoretic drink or wet or dry rubbings. The author recommends a mixture of saturated infusion of camomile, 200 to 300 grammes; camphor, 1 to 2 grammes dissolved in sufficient rectified spirit; laudanum, 1 to 2 grammes; one tablespoonful for a dose.

After some hours' duration of the premonitory symptoms, the diarrhœal stage begins. The intestinal exhalations seem to hinder the exercise of the other excrementitial functions. The microbes set up a process of fermentation in the intestine, and cause destruction and shedding of the epithelium. This allows a great drain of the serum of the blood into the intestine; on one side, the renal secretion diminishes and finally ceases; on the other the intestinal liquid, and even that effused in other cavities, is absorbed; the skin dries and becomes mummified. All tends to increase the intestinal watery exhalations. This is the explanation of those who consider the disease a malady of the intestines, and who especially admit the comma-bacillus theory. But all idea of functional antagonism disappears, if what happens in cholera is to be subordinated to a general infective process. It then appears that the malaise of the prodromal symptoms marks the beginning of a progressive alteration of innervation and circulation, to which succeed special visceral alterations; in the digestive tubes, vomiting and diarrhœa; in the liver, arrest of the secretion and excretion of bile; in the kidneys, oliguria and anuria. And as the anxiety and affliction of the patient increases, the force of the circulation diminishes, the molecular changes are impeded, the breath becomes cold, the body becomes cadaveric, and life ebbs with the intestinal

flux. However the state of poisoning of the organism originates, it is certain that it appears with the first symptoms of the prodromal state. The observation of cases of spontaneous cure induce the belief that, in whatever manner the general infection takes place, a spontaneous process of elimination, as in other contagious diseases, is the means by which the infected body is to regain health. In some cases, with scarcely any or with no diarrhœa, the patient nevertheless dries up, and mummifies as it were, just as when the dejections are copious. Cure is more frequent when there have been moderate vomiting and diarrhœa.

Treatment must be symptomatic. 1. Rest must be insisted on, and strict diet. 2. Cardiac and vascular excitants, diaphoretics and diuretics, should be given. 3. Frequent frictions of the body should be made. 4. A cold bath should be given, even repeated several times in the day, followed by general massage and packing with flannel. 5. Before the skin has lost its power of reaction, large mustard plasters should be applied to the abdomen. 6. If the dejections be very copious, bismuth and Dover's powder should be given. 7. The vomiting may be treated with ice, or, if obstinate, with hypodermic injections of morphia. Frictions and packing are means of much therapeutic importance, since they not only maintain the surface-temperature, but exert an exciting reflex action on visceral innervation. The cold stage should not be waited for before using them. If the patient before the onset of the prodromal symptoms have been constipated, castor-oil in moderate doses should be given. If without much diarrhœa, and with progressive general prostration, he acquire the well-known characteristic colour, or especially if there is any trace of jaundice, calomel should be tried. In the algide stage, subcutaneous or intravenous injections of saline solutions may be tried. The aim of our treatment should be to succour the general conditions which are threatened in a measure not proportional to the morbid intestinal manifestations, and to correct the morbid intestinal function. Of the many bactericides with which experiments have been made in the laboratory, some do not admit of their being used in the treatment of the cholera patient, and others have been already tried in past epidemics without success. Although no specific is known, Professor de Giovanni thinks much may be expected from rational symptomatic treatment on the above lines; and that even in the cure of this, the most fatal of all contagious diseases, nothing justifies the scepticism of some practitioners. G. D'ARCY ADAMS, M.D.

ARTICLE 3354.

NEYNABER ON ACETATE OF MAGNESIUM.*

THIS preparation has not been brought as fully to the notice of physicians and pharmacists as it undoubtedly deserves. It possesses qualities which entitle it to a better consideration. Acetate of magnesium is very soluble in alcohol as well as in water, so much so that this quality has been spoken of as an objection to its general use; whereas, if we look at it in the proper light, this is one of its great advantages, since it enables us to use it with elixirs, wines, syrups, tinctures, fluid extracts, &c. For all these preparations it can be combined with some pleasant aromatics, with laxatives, such as rhubarb, mandrake, leptandra, &c., in neutral solutions, as well as with an excess of acid, such as citric acid, tartaric acid, &c. It acts as a purgative; and, if it be combined with rhubarb, jalap, mandrake, leptandra, buckthorn, senna, or other laxatives or cathartics and purgatives, a very valuable composition is formed. To illustrate its usefulness, and to show in which way it may be dispensed, several formulæ are given below, yielding preparations which are stable and can be kept any length of time without undergoing any change, while all preparations containing citrate of magnesium have the great disadvantage of not being stable.

It is a well-known fact that many of the preparations in the market sold as liquid citrate of magnesia, citrate of magnesia granules, &c., contain a very small percentage of the citrate of magnesium, while the bulk is made up of tartrate of sodium, citrate of sodium, &c., because the pure citrate of magnesium is apt to undergo changes which render the preparation insoluble and unsaleable.

If we use an exact quantity of calcined magnesia in making the acetate, and then evaporate to a given weight, we can make exact calculations of the strength of the liquid.

In the following are given some practical formulæ for the combination of acetate of magnesium with other laxatives, cathartics, &c.

Tincture of Rhubarb and Magnesium.—Calcined magnesia, 2 ounces; acetic acid, a sufficient quantity. Evaporate to 5 fluid ounces and 5 fluid drachms. Add extract of rhubarb, 2 fluid ounces; fluid extract of cardamom, 3 fluid drachms; alcohol, 8 fluid ounces. Mix = 1 pint.

Cathartic Elixir.—Calcined magnesia, 240 grains; acetic acid, a sufficient quantity; fluid extract of Culner's root, ½ fluid ounce; fluid extract of butternut bark, ½ fluid ounce; fluid extract of Alexandria senna, 2 fluid ounces; flavour, a sufficient quantity; simple syrup, 4 fluid ounces; deodorised alcohol, 4 fluid ounces; citric acid, 40 to 60 grains; water, sufficient to make 1 pint.

Elixir laxans (Laxative Elixir, mild).—Calcined magnesia, 120 grains; acetic acid, a sufficient quantity; fluid extract of Alexandria senna, 2 fluid ounces; fluid extract of coriander, 2 fluid drachms; deodorised alcohol, 1 fluid ounce; simple syrup, 4 fluid ounces; citric acid, 30 to 60 grains; water, sufficient to make 1 pint.

Elixir of Rhubarb and Magnesium (Rhubarb, 10 grains; magnesia, 5 grains to the tablespoonful). Calcined magnesia, 1,280 grains; acetic acid, a sufficient quantity; fluid extract of rhubarb, 5 fluid ounces and 2⅔ fluid drachms; deodorised alcohol, 2 pints; simple syrup, 2 pints; flavour to suit taste; water, sufficient to make 1 gallon. If desired, citric acid can be added, say about 30 to 60 grains, according to taste.

The *U.S. Pharmacopœia* of 1880 has the following modified formula for *Liquid Citrate of Magnesium*, using carbonate in place of calcined magnesia as required by the *U.S. Pharmacopœia* of 1860:—

Carbonate of magnesia, 200 grains; citric acid, 400 grains; syrup of citric acid, 1,200 grains; bicarbonate of potassium, 30 grains; water, a sufficient quantity to fill a bottle of about 16 fluid ounces.

To replace this by acetate of magnesium, Mr. Neynaber proposes the following formula:—

Solution of Acetate of Magnesium.—Carbonate of

* From the *American Journal of Pharmacy*, September 1884.

magnesium, 200 grains ; acetic acid, sufficient quantity to neutralise ; syrup of citric acid, 1,200 grains ; bicarbonate of potassium, 30 grains ; water enough to fill a bottle of about 16 fluid ounces.

Liquor Magnesiæ Citratis (*U.S. Pharmacopœia*, 1860).—Magnesia (calcined), 120 grains ; citric acid, 450 grains ; syrup of citric acid, 2 fluid ounces ; bicarbonate of potassa, 40 grains.

To replace this by acetate of magnesium the following formula might be used :—

Liquor Magnesii Acetatis, or Solution of Acetate of Magnesium (Magnesia).—Calcined magnesia, 126 grains ; acetic acid, sufficient quantity to saturate ; syrup of citric acid, 2 fluid ounces ; bicarbonate of potassa, 40 grains.

ARTICLE 3355.

BARTHOLOW ON CHRONIC ILEO-COLITIS AND LARYNGISMUS STRIDULUS.

DR. ROBERTS BARTHOLOW, in a clinical lecture,* made the following remarks upon a case showing the above complication. The child before you was shown you some time ago, suffering with chronic ileo-colitis. The disease had been extremely persistent and severe, but under a properly regulated diet and the use of tincture of iodine and carbolic acid, the so-called carbolate of iodine—a half a drop of each being taken three times a day—there has been rapid improvement, and now the symptoms have disappeared, notwithstanding that the instructions in regard to the regulation of the diet have been imperfectly obeyed. You will remember that I insisted upon a change in the diet as of the first importance in the treatment of this case.

I hope that you will observe the character of the cough which the child has. It has frequently occurred ever since the existence of the ileo-colitis. Every time the child takes cold it has this hard, ringing cough which you now hear, and which is termed a 'croupy cough.' I have on several occasions insisted that this phrase is a misnomer. It is called croupy simply because it has the loud, ringing, metallic character which is associated with the cough of spasmodic croup. This is not the true croupy cough. The cough of exudative laryngitis is husky, in addition to being ringing and metallic. The cough which this child presents is significant of laryngismus stridulus ; that is, an affection of the larynx in which the muscles are thrown into a state of spasm. A child who during the day has been exposed to the cold, or who in the evening has eaten heartily of indigestible food, wakes up in the night with an attack of so-called croup. This is really an example of laryngismus stridulus, or spasm of the muscles of the larynx. In the case I have supposed there are two factors : the child takes cold, or it has an irritation of the gastro-intestinal mucous membrane. We can here apply with great certainty our physiological knowledge. The mechanism is very obvious. The pneumogastric nerve which supplies the mucous membrane of the fauces, and the gastro-intestinal mucous membrane in part, also has branches going to the larynx. This nerve is both motor and sensory in function. All the muscles of the larynx, with the exception of the crico-thyroid, are supplied by the inferior laryngeal nerve, while the superior laryngeal nerve is distributed to the mucous membrane and the crico-thyroid muscle. Now we have the terms of the problem. Irritation of the peripheral distribution of the pneumogastric nerve is referred to its motor branches, and the muscles of the larynx are thrown into a state of spasm. It would be a great mistake to confound this condition with true croup.

* *Boston Med. and Surg. Jour.*, Sept. 18, 1884.

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*PHARMACOLOGY.**

ARTICLE 3356.

A COMMUNICATION on the subject of peptonisation has been recently presented by Herr Chandelon to the German Chemical Society. It is well known that peroxide of hydrogen is decomposed with the evolution of oxygen in the presence of fibrin and organised tissue, as well as several metals and oxides ; and it has been generally stated that this takes place without these substances undergoing change, whilst the non-evolution of oxygen from peroxide of hydrogen in the presence of other organic substances has been assumed to be due to the absence of any reaction. Herr Chandelon seems to have suspected that in this latter case there might be reaction, though it was not perceptible, because the oxygen was used up in oxidising the organic matter ; and, for the purpose of testing his suspicion, he submitted egg-albumen suspended in water to the action of nascent peroxide of hydrogen. Only negative results, however, were obtained, no such oxidation-products as leucin or tyrosin being detected. Nevertheless, it was observed that the albumen underwent some change, in that the volume of the precipitate produced by boiling the mixture gradually diminished, whilst the liquid after separation of the coagulum by filtration gave upon treatment with alcohol a copious precipitate, which, upon being redissolved in water, showed all the reactions of an albumenoid substance. Further investigation left no doubt that the albumen had, at least partially, been converted into peptone.

The conclusions at which Herr Chandelon arrived may be thus summarised. Peroxide of hydrogen in the nascent condition peptonises egg-albumen, and peptonisation may be considered a phenomenon of hydration—an opinion that is supported by the formation of peptone from albumen by re-agents capable of fixing water (such as dilute acids, alkalies, &c.), and its reconversion into albumen by a dehydrating material like acetic anhydride. It is suggested that the albumen (anhydride) gives up an atom of oxygen to the peroxide of hydrogen similarly as oxide of silver does, and that the two groups that had been united by the oxygen then combine with two hydroxyls. The conversion takes place by the same process as in digestion with peptic ferments. Thus the stages with (*a*) pepsine, acting in acid solution, are dyspeptone syntonine, propeptone, peptone ; with (*b*) trypsine, in alkaline solution, they are dyspeptone globuline, propeptone, peptone ; with (*c*) peroxide of hydrogen produced by electrolysis in acid solution, the stages are the same as with pepsine in acid solution ; whilst with (*d*) peroxide of hydrogen produced by barium peroxide, carbonic acid, and water, in neutral or alkaline solution, they are dyspeptone proteine, propeptone, peptone. It will be seen, therefore, that any difference occurs in

* Abridged from *The Pharmaceutical Journal and Transactions* November 1884.

the first stage, and appears to be dependent rather upon the acid or alkaline character of the medium than upon the reaction itself. The author therefore puts forward the hypothesis that the digestive ferments promote digestion by the production of peroxide of hydrogen. These results appear to throw light upon some unexplained phenomena met with by M. Béchamp in his investigation as to the constitution of albumenoids (*Pharmaceutical Journal* [3], Vol. xiii.), and are in accord with the behaviour of the papaine ferment observed by M. Wurtz (*Pharm. Jour.* [3], Vol. xi.). It would be interesting to know whether peptones so formed are devoid of the bitterness which is an objection in those formed under the influence of ferments.

The statements that have been put forward as to the remarkable power of lowering the temperature in cases of fever possessed by a substance that has been recently introduced under the name of 'antipyrin' have given rise to many inquiries as to its nature and source; but hitherto it has not been possible to say more than that it was an article sent out by a German firm, the composition of which had not been disclosed. A paper by Dr. Knorr throws some light upon the question. Antipyrin, according to Dr. Knorr, is one of a series of derivatives from a hypothetical base to which he has given the name 'chinizin,' representing it by the formula $C_9H_{10}N_2$. These chinizin derivatives are products of the action of diacetic ether upon one of the hydrazines, a class of bodies, it may be useful to mention, represented as containing the nitrogen group $=N-N=$, of which the free affinities are saturated either by hydrogen or alcohol radicals. Phenylhydrazin ($C_6H_5H.N-.N.H.H$) is obtained by the reduction of diazobenzene sulphonate with sulphurous acid. When equal molecules of it and diacetic ether react in the cold, the elements of water are eliminated; and the residue combines to form phenylhydrazindiacetic ether, which, upon being heated to 100° C., parts with the elements of ethylic alcohol and is converted into methyloxychinizin. Methyloxychinizin possesses the properties both of an acid and a base. But it still contains an atom of hydrogen easily replaceable by an alcohol group, and the compound then loses its acid character, and is converted into a base with a strongly antipyretic action. The conversion may be effected by heating in a tube to 100° C., a mixture of equal parts of methyloxychinizin, methyl-iodide, and methyl-alcohol, decolorising the product by boiling with sulphurous acid, distilling off the alcohol, treating the residue with strong soda ley, shaking the heavy oil that separates with ether, and evaporating, when dimethyloxychinizin ($C_{11}H_{12}N_2O$) separates in lustrous crystals melting at 113° C. This appears to be the compound to which Dr. Knorr has given the name 'antipyrin;' but it must not be confounded with another compound to which he has given a similar systematic name, di-methyloxychinizin, differing only by the introduction of a hyphen, that compound being a condensation product of two molecules of methyloxychinizin, represented by the formula $C_{20}H_{18}N_4O_2$. There are also two other isomeric dimethyloxyhydrazins that have been described as products of reactions with other hydrazins, but these are distinguished from the one named antipyrin by their acid character and being less soluble in water, antipyrin being very soluble. In aqueous solution antipyrin gives with perchloride of iron a deep red colour, perceptible even when diluted to 1 part in 100,000; this reaction is common to most of the chinizin derivatives. With nitrous acid a dilute solution (1 in 10,000) gives a blue-green colour, and a concentrated one a separation of green crystals of an isonitroso compound.

Some years since it was found that, by heating cinchonine ($C_{19}H_{22}N_2O$) with phosphorus-pentachloride, and boiling the chloride produced with alcoholic potash, a base devoid of oxygen was obtained, which was named cinchene ($C_{19}H_{20}N_2$); and that, upon heating this base with concentrated hydrochloric acid, methyl-chloride and ammonia were split off and the elements of water taken up to form apocinchene ($C_{18}H_{17}NO$). Messrs. Comstock & Königs now state that they have obtained from cinchonidine a base which in its chemical and crystallographic characters appears to be identical with cinchene, and like it yields apocinchene. It is suggested, therefore, that the isomerism of the two alkaloids, cinchonine and cinchonidine, depends upon the different manner in which the elements of a molecule of water in the two alkaloids are combined with the cinchene. From quinine a corresponding base was obtained, containing the elements of a molecule of water less than quinine, to which the name 'chinene' has been given.

Professor J. U. Lloyd calls attention to the fact (*Amer. Drug.*, September) that there are two sulphates of berberine, and that the lemon-yellow crystalline powder obtained by heating a solution of commercial sulphate of berberine with ammonia water and shaking the solution with ether is not the free alkaloid, as has been assumed, but a neutral sulphate, the compound usually met with being a bisulphate. In respect to solubility in water the behaviour of these two compounds is the reverse of the two sulphates of quinine, the ordinary (bi)sulphate of berberine being only moderately soluble, whilst the new sulphate is very soluble.

In view of the unmistakable resemblance, both in composition and in chemical behaviour, which investigation has shown to exist between conydrine and tropine, the question presented itself whether the former might not, like the latter, exist in the plant-organism in combination with an acid, and whether there might not occur in the hemlock a compound corresponding to atropine in belladonna, which with the elements of water would yield conydrine and an acid, just as atropine under the same conditions is converted into tropine and tropic acid. Professor A. W. Hofmann requested Herr W. Merck to examine the residual liquors from the preparation of coniine and conydrine in his establishment. Professor Hofmann received shortly afterwards a consignment of a crystalline compound, having acid properties, which had been obtained from the alkaline liquor left after distilling over the coniine and conydrine by first supersaturating it with acid, and then treating it with ether and evaporating the ethereal solution. The acid was still strongly coloured and mixed with resinous substances, but after purification was obtained in yellowish lamellæ, melting with incipient decomposition and browning at near 230° C., and presenting the characters and having the composition of caffeic acid, $C_9H_8O_4$. It is interesting to note that this acid, which was first obtained by Hlasiwetz as a decomposition-product of caffeotannic acid and afterwards prepared by Tiemann from the aldehyde of protocatechuic acid, has also been reported by Körner (*Pharm. Jour.* [3], Vol. xiii.) to have been found in a mother liquor

obtained in the manufacture of quinine from cuprea bark.

The test recently suggested by Mr. A. W. Gerrard for the tropine alkaloids (*Pharm. Jour.* [3], Vol. xiv.), the production in an alkaline liquid of a red precipitate upon the addition of a 5 per cent. alcoholic solution of mercuric chloride, has been the subject of experiment by Dr. Schwesinger, who confirms Mr. Gerrard's statement in respect to atropine (*Pharm. Zeit.*, Oct. 1). But he reports that with hyoscyamine a red precipitate was not produced when 2 centimètres of the reagent were used to a milligramme of the alkaloid, though he obtained it by using only two drops to the same quantity and gentle warming. This difference of behaviour, he suggests, might be utilised to distinguish between atropine and hyoscyamine, for which purpose a 1 per cent. solution is preferable. With homatropine he failed altogether to obtain the reaction; only a yellow precipitate being formed, which disappeared upon further addition of the mercuric solution and warming.

Several communications have been published upon the constituents of various essential oils. Wormseed oil has been investigated by Messrs. Hell, Sturcke, and Ritter, and Messrs. Wallach and Brass. The latter authors confirm the statements of previous observers that the principal constituent of oleum cinæ is a compound having the composition $C_{10}H_{18}O$, which, as being an isomer of borneol, they propose to call 'cyneol;' and that this is accompanied by a certain quantity of hydrocarbons with a similar boiling point. But they have also met with another compound richer in oxygen, and having a higher boiling point. Pure cyneol is a liquid having a characteristic but not disagreeable camphor-like odour, boiling at 176° to 177° C., and having a specific gravity of 0·92297 at 16° C. It is optically inactive, though the rectified oil from which it is obtained has been found to have a rotation to the left of 2°·9, due to other constituents boiling at higher temperatures. Oxidised by boiling with nitric acid, cyneol yielded besides the lower fatty acids essentially oxalic acid, but no acid of the aromatic series; while the hydrocarbons ($C_{10}H_{16}$ and $C_{10}H_{14}$) accompanying it in the oil yielded upon oxidation always more or less toluylic or terephthalic acid. Cyneol, by treatment with gaseous hydrochloric acid, is converted into a hydrocarbon ($C_{10}H_{16}$), to which the name 'cynen' has been given.

Herr Wallach reports that cajeputol, the principal constituent of oil of cajeput, is identical with cyneol, the principal constituent of wormseed-oil, mentioned in the preceding paragraph. As cynen, the turpene obtained from cyneol, possesses an odour of lemons, some experiments were also made as to its relationship towards the turpenes of oils from aurantiaceous plants. Oleum citri treated with bromine yielded a small quantity of a crystalline tetrabromide. Oleum corticis aurantiorum, which consisted mainly of the turpene hesperiden, yielded a tetrabromide more abundantly, closely resembling cynen tetrabromide, but having a lower melting point. Herr Wallach, therefore, concludes that there is probably a near chemical relationship between hesperiden and cynen, though not identity.

Safrol is the principal constituent of the essential oil of *Sassafras officinalis*, from which it crystallises, on cooling the fraction boiling between 228° and 235° C. to −25° C., as a colourless, transparent, strongly refractive optically inactive mass, melting at 8° C., boiling at 232° C., and having the composition $C_{10}H_{10}O_2$. According to Dr. Poleck (*Chem. Zeit.*, Oct. 9) it is an extremely stable compound, the oxygen not being contained in the molecule as hydroxyl, but in much closer combination, all his attempts at its reduction being unsuccessful. In the behaviour of safrol towards reagents it presents no analogies with alcohols, ethers, phenols, quinones, or other classes of organic compounds. Dr. Poleck considers that it is probably a methylpropylbenzol, or cymol, in which four atoms of hydrogen of the benzol are substituted by two atoms of oxygen.

Jalapin, the glucoside of *Ipomea orizabensis*, has been investigated by Dr. Samuelson in Dr. Poleck's laboratory in Breslau University (*Chem. Zeit.*, Oct. 9). It is represented by the formula $C_{34}H_{56}O_{16}$, being the anhydride of jalapic acid, and when boiled with baryta water it splits up into two molecules of jalapic acid, forming the barium salt. Dilute hydrochloric acid splits jalapin up into grape sugar and jalapinol ($C_{16}H_{30}O_3 + \frac{1}{2}H_2O$), possessing all the properties of an aldehyde. Jalapinol, when decomposed by alcoholic potash, yields jalapinolic acid ($C_{16}H_{30}O_4$), isobutyl alcohol and a neutral resin, probably a polymer of jalapinol. Both jalapinolic acid and jalapinol are oxidised by potassium permanganate to isobutyric acid. Jalapinol would, from these and other considerations, appear to be tetrabutylaldehyde.

A newly observed constituent of Siam benzoin is the subject of an interesting preliminary communication from Herr Hirchsohn (*Pharm. Zeit für Russl.*, Band xxiii.). Upon shaking finely pulverised Siam resin with about ten times its weight of carbon bisulphide, and allowing the mixture to stand, it separated in twenty-four hours into two layers, the upper one thick and containing insoluble resin, the lower one a clear yellow solution. This solution was removed by means of a siphon, filtered, three-fourths of the carbon bisulphide distilled, and the remainder left in a cool place. After a few days, colourless warty crystals separated, that had a distinct vanilla odour and formed neutral solutions with carbon bisulphide, ether, benzol, chloroform, and 95 per cent. alcohol. The alcoholic solution, upon being boiled, assumed a yellowish-green colour, and then showed an acid reaction. The crystals were insoluble in water, but upon boiling them in water they melted to an oily mass, the liquor then having an acid reaction, which gradually became more intense, and eventually yielding fresh crystals that may have consisted of benzoic acid. Concentrated sulphuric acid dissolved the original crystals with a beautiful red colour, and by shaking the acid solution with ether and evaporating, a crystalline body was obtained showing all the characters of benzoic acid. A smaller proportion of tabular crystals was obtained by a similar treatment of Sumatra benzoin.

In a communication to the Academy of Sciences (*Comptes Rendus*, tome xcix.) on the antiseptic properties of carbon bisulphide, M. Ckiandi Bey points out that, contrary to the statements generally found in works on chemistry, it is soluble in water at a temperature of 64° to 68° F., to the extent of 2 to 3 parts per 1,000. This solution arrests all fermentation, kills microbes, and is a most energetic antiseptic; it also has a considerable penetrating power. When the solution is taken internally it produces a hot and sweet taste in the mouth, then a sensation of heat in the stomach and pricking of the mucous membrane of the nose, similar to that caused by

sulphurous acid, and slight dulness in the head, which, however, is not lasting. For these reasons the author recommends its use in cholera and all zymotic diseases, typhus, diphtheria, phthisis, &c. It has already been experimented with by Dr. Dujardin-Beaumetz, who found that in case of typhus the diarrhœa was arrested, the stools disinfected, and the breath rendered sweet. As the cost of the solution is extremely small, M. Ckiandi Bey suggests that it might be used for watering the streets and cleansing houses, &c. For medicinal use it is necessary that the sulphide should be purified by agitation with metallic mercury until it no longer gives a black precipitate. It then has an odour which recalls that of chloroform. The solution can be made by energetically shaking the sulphide with water. Externally applied to the skin by means of a wad of cotton, it proves a most energetic revulsive, producing a pain like that by scalding with boiling water, which immediately ceases when air is blown upon the skin, so as to vaporise the sulphide remaining on it. An alcoholic solution slowly decomposes, giving rise to sulphuretted hydrogen and other compounds.

A new therapeutic value has been discovered in pellitory root by Dr. Roth. Knowing that the drug has been found useful in paralysis of the tongue and pharynx, he was led to try it in the treatment of globus hystericus, which he regards as due to paræsthesia of the sympathetic. In six cases in which he used it, satisfactory results followed. The dose he gave was ten to twenty drops four times a day (*Practitioner*, p. 286). In a case which came under the notice of the writer, smoking a cigarette gave immediate relief on several occasions in which it was tried.

SURGERY.

RECENT PAPERS.

3357. MADDEN.—A Case of Incontinence of Urine from Malformation. (*Brit. Med. Jour.*, September, p. 464.)

3358. BALL.—The Radical Cure of Hernia by Torsion of the Sac. (*Brit. Med. Jour.*, September, p. 461.)

3359. DIXEY.—A Soda-water Bottle in the Rectum. (*Lancet*, August, p. 395.)

3360. THOMAS.—A New Perforated India-rubber Knee-cap. (*Lancet*, August, p. 370.)

3361. NORTON.—Gangliar Disease of Joints. (*Brit. Med. Jour.*, August, p. 413.)

3362. STRAHAN.—Bicycle Riding and Perineal Pressure. (*Lancet*, September, p. 490.)

3363. HERSCHELL.—The Effect of Bicycle Riding. (*Lancet*, September, p. 569.)

3364. GAMGEE.—A Pin-Sling. (*Lancet*, September, p. 451.)

3365. BEAUMONT.—A New Operation for the Removal of Vesical Calculus in the Female. (*Brit. Med. Jour.*, October, p. 654.)

3366. RICHMOND.—A Prepuce-Dilator. (*Lancet*, September, p. 544.)

3367. ESLER.—Oakum as a Surgical Dressing. (*Brit. Med. Jour.*, October, p. 651.)

3368. SILBERMANN.—On Instruments for Occluding an Ureter for Diagnostic Purposes. (*New York Med. Jour.*, April 9.)

3369. BIDDER.—Re-implantation of a Tooth. (*Wiener Med. Blätter*, May 8.)

3370. KOCHER.—A Needle in the Thumb. (*Wiener Med. Blätter*, May 8.)

3371. Removal of Sarcomatous Spleen. (*Allgem. Wiener Med. Zeitung*, April 29.)

3372. BIONDI, D.—Extirpation of the Lung after Localised Tuberculosis Experimentally Produced. (*Giorn. Int. delle Sci. Med.*, Fasc. ix., 1884.)

3373. JATZUTA, K. L.—On Naphthalin in the Treatment of Wounds. (*Vratch*, 1884, No. 28, pp. 464-5.)

3374. LUKASHEVITCH, S.—On the Use of Sculptor's Clay in Acute Epididymitis. (*Vratch*, No. 31, 1884, p. 525.)

3375. MIKULICZ, PROFESSOR. — On Extirpation of Goître. (*Przeglad Lekarski*, No. 28, 1884, and *Vratch*, No. 32, 1884, p. 549.)

3376. KACZOROWSKI.—On the Connection between Affections of the Gum and other Diseases. (*Przeglad Lekarski*, Nos. 28 and 29, 1884, and *Vratch*, No. 32, 1884, p. 549.)

3377. KORINFSKY.—A Case of Tetanus ending in Recovery under the Administration of Curare. (*Meditz. Obozr.*, No. 13, 1884, pp. 63-5.)

3378. RUNSTRÖM. — Fracture of the Skull with Aphasia and Diabetes. (*Hygiea*, 1883: and *Nord. Medicin. Arkiv*, Band xv., Heft 4.)

ART. 3357. *Madden on a Case of Incontinence of Urine from Malposition of the Female Ureter.*—Dr. More Madden, in the *Brit. Med. Jour.*, September 1884, p. 464, relates the case of a young lady, now in her sixteenth year, who consulted the author for incontinence of urine, four or five years ago, previously to going abroad. Iron with belladonna, blistering the sacrum, &c., were prescribed, but proved of no benefit. Ultimately she was brought to London for medical advice, and went the round of several eminent physicians and surgeons. Still the incontinence remained. As the flow of urine was incessant, an examination was decided upon, when a minute aperture was discovered about half an inch above the meatus urinarius, from which a small stream of urine was continually escaping, almost *guttatim*. Dr. Madden arrived at the conclusion that the case was one of malposition of the right ureter. An operation was suggested, but the parents of the girl have not yet consented, and any hint that others may suggest would be gladly accepted by the author.

3358. *Ball on the Radical Cure of Hernia by Torsion of the Sac.*—In the *Brit. Med. Jour.*, Sept. 1884, p. 461, Mr. C. B. Ball sets forth the advantages of twisting the sac in operating for the radical cure of hernia. The advantages claimed are these. 1. There is a more thorough closure of that portion of the sac situated in the inguinal canal than can be obtained by any simple ligature, no matter how high up it is placed. 2. The twisting has the effect of tightening and throwing into ridges the peritoneum for a considerable area surrounding the abdominal opening. 3. The danger of septic peritonitis is diminished. The author's experience is as yet small, but he urges other surgeons to give this operation a trial, so that by reliable statistics comparisons may be made between this and other methods of operation.

3359. *Dixey on a Case of a Soda-Water Bottle in the Rectum.*—Dr. Dixey, in the *Lancet*, Aug. 1884, p. 395, writes that a man came to him one evening, in great pain, saying he had a 'soda-water bottle in his fundament.' On introducing a finger into the bowel, the edge of the mouth of a bottle could just be detected. After some difficulty a large glass

bottle, seven inches long and seven in circumference, was extracted. His story was that some one had advised him to open his bowels by means of a bottle, as medicines had failed to give him relief; in attempting to follow this advice, the bottle had slipped from his grasp, and all his efforts to get it again were unavailing. [In the *Medical Digest*, sect. 881 : 5, a singular collection of analogous cases may be consulted.—*Rep.*]

3360. *Thomas on a New Perforated India-rubber Knee-cap.*—Mr. H. O. Thomas, in the *Lancet*, Aug. 1884, p. 370, describes a new knee-cap, made of ordinary rubber in one piece, perforated over every half-inch of its surface. The advantages claimed are these. 1. A firmer and better support is given to the affected part. 2. It is more durable and less costly. 3. It is elastic, cool, and exerts less undue pressure upon the joint than the ordinary silk or cotton knee-cap commonly used. A diagram accompanies the description.

3361. *Norton on Gangliar Disease of Joints.*—In the *Brit. Med. Jour.*, Aug. 1884, p. 413, is published a paper read at the annual meeting of the British Medical Association by Mr. A. T. Norton, entitled 'Gangliar Disease of Joints.' It is a particular form of destructive disease, totally different from scrofulous and rheumatic diseases in its pathology, though resembling them in external appearance, and often in its symptoms. It is associated with the development of ganglions filled with melon-seed bodies in the neighbouring tendons, and such ganglions may or may not be connected with the joint. Notes are given of four cases, from which the following characteristics of the disease are gathered. It occurs almost invariably in people over 35 years of age. It is a truly destructive disease, and for a certainty ends in ulceration of the bones, preferably the small bones in the cases of the wrist and tarsus. The disease never improves, though it may remain dormant for an indefinite time. It is a chronic disease, extending often over ten to fifteen years or more. It is not painful to the touch, and is not accompanied by much pain until ulceration sets in; then it progresses very rapidly. It appears to arise spontaneously, and not to result from injury. It may be diagnosed from either common ulceration of the cartilages, or from rheumatic disease, essentially by the presence of ganglions. Treatment is not satisfactory. The ganglions must never be opened; they may be incised subcutaneously or aspirated.

3362. *Strahan on Bicycle Riding and Perineal Pressure.*—Dr. Strahan, in the *Lancet*, September 1884, p. 490, points out the evil caused in bicycle riding, by causing pressure upon the perinæum in growing boys, affecting directly the prostate, the muscles of the bulb, &c., and indirectly the whole generative system. The bicycle saddle is now reduced to the smallest possible limit, and the motion produced by riding the machine causes irritation and congestion of the prostate and surrounding parts, and tends to produce exhaustion and atrophy of the delicate muscles of the perinæum. Attention is then drawn to the organs of generation, and this leads to masturbation in the timid, to early sexual indulgence in the more venturous, and ultimately to early impotence in both. In subsequent pages, Dr. Strahan's statements are strenuously denied by many observers.

3363. *Herschell on the Effect of Bicycle Riding.*—In the *Lancet*, Sept. 1884, p. 569, Dr. Herschell writes that he has lately had two cases under his care where stricture of the urethra was caused by bicycle-riding. One patient was 18 years old, had never suffered from gonorrhœa, nor practised masturbation. There was a dense stricture 4½ inches from the meatus. The second case occurred in a middle-aged man. In this case, there was a stricture 5 inches from the meatus, accompanied by an enlarged and tender prostate. Both cases were treated by internal urethrotomy, and made satisfactory recoveries. In the same number, p. 569, Mr. H. A. Allbutt, who is representative councillor and medical officer to two cycling clubs in Leeds, writes that he considers cycling a health-giving exercise, and that there is no danger to the perinæum from the pressure of the saddle.

3364. *Gamgee on a Pin-Sling.*—In the *Lancet*, September 1884, p. 451, a diagram and description are given of a pin-sling suggested by Mr. Sampson Gamgee. A patient suffered from a painful condition of the tip of his left little finger. To secure the benefits of rest and position, the elbow was bent at an acute angle, and the hand raised; then the sleeve at the wrist, being pinched up, was fixed to the coat by a strong safety-pin; with another, a fold of the sleeve just under the elbow was attached to the coat. Rest was absolute, and the patient went about his duties in comparative comfort.

3365. *Beaumont on a New Operation for the Removal of Vesical Calculus in the Female.*—In the *Brit. Med. Jour.*, Oct. 1884, p. 654, Dr. T. Beaumont describes how, in a girl aged 9 years, he extracted a calculus which was too large to be removed by lithectasy. The patient was placed in the position of lateral lithotomy, a curved staff was introduced, and an incision made into the left labium, parallel with and close to the ramus of the os pubis. The incision was then deepened by dissecting inwards and upwards in the direction of the neck of the bladder, care being taken not to wound the vagina. On reaching the membranous part of the urethra, the groove of the staff was felt, and the neck of the bladder was divided on it. The forceps was then introduced, and a stone three-quarters of an inch in diameter removed without difficulty. The wound healed within three weeks, and the girl left the hospital twenty-three days after the operation.

3366. *Richmond on a Prepuce-Dilator.*—In the *Lancet*, Sept. 1884, p. 544, a description is given of a new instrument devised by Mr. Richmond for the purpose of dilating the prepuce, especially in those cases where the patient cannot be induced to submit to the knife. An instrument proper for the purpose should—(1) possess blades which can be introduced separately; (2) the blades must be of suitable size and shape to suit the case; and (3) it should be possible to open them parallel to one another, or at any angle. The instrument described and depicted combines these requisites. The idea is not to stretch the foreskin forcibly, and at one sitting; but to dilate it gradually, in the same manner as a stricture of the urethra is gradually dilated by passing catheters. If the instrument be used for ten minutes twice a week, the foreskin will in most cases go back in a month or six weeks.

3367. *Esler on Oakum as a Surgical Dressing.*—Dr. Esler, in the *Brit. Med. Jour.*, Oct. 1884, p. 651, upholds the use of oakum as a surgical dressing. One of its most obvious advantages is that it effectually keeps down any offensive odour. The serum from a wound is drained as it is discharged, and flows freely into its porous substance. In amputations, it forms a soft and comfortable pad for the

stump. It can be used instead of a poultice by dipping it in warm water, and covering with waterproof tissue. In erysipelas it is most valuable, and if the part affected be wrapped up in it, no other agent is needed. As a dressing for burns and scalds it is invaluable; it may be applied to the granulating surface with impunity, and is more easily detached than almost any other dressing. In uterine and vaginal affections much good is derived from the use of oakum to absorb the unhealthy discharges. Oakum, in fact, is a clean, handy, healthy, and cheap dressing. [A glance at sect. 160 : 6 of the *Medical Digest* will show that the value of oakum has been well established since 1862.—*Rep.*]

3368. *Silbermann on Instruments for Occluding an Ureter for Diagnostic Purposes.*—In the *New York Med. Jour.*, April 9, 1884, an account is given of an instrument, devised by Dr. Silbermann, for occluding the ureter. It consists of a catheter with a fenestra near the end, on the right or left side, according to which ureter is to be occluded. At the fenestra is a rubber balloon, which, when in the bladder, is distended by quicksilver introduced through the catheter. Thus a heavy tumour, as large as an egg, is made to shut off all the urine coming from one kidney, by pressing upon the ureter where it enters the bladder. Dr. Polk has also made experiments with a double sigmoid catheter, with a similar object. The ureter is compressed between the catheter introduced into the bladder, and a bulbous-ended rod passed into the rectum or vagina. By this means the ureter can be closed so perfectly, that in the dead body no fluid passed, although the ureter was dilated to five or six times its normal diameter with injections of water.

RICHARD NEALE, M.D.

3369. *Bidder on Re-implantation of a Tooth.*—At the Congress of German Surgeons at Berlin on April 17 (*Wiener Med. Blätter*, May 8), Herr Bidder, of Berlin, reported a case of successful re-implantation of a tooth. A girl, aged 14, suffered in the summer of 1879 from a subperiosteal abscess in the anterior part of the hard palate, which caused loosening of one of the incisors. The tooth was therefore extracted, but, as it was perfectly sound in the root and every other part, it was re-inserted, after careful washing with a carbolic solution, into the alveolus, where it remained firm for more than three years. In the autumn of 1882 it again became loose, and fell out, when the root was found to be completely absorbed. This case seems to show that the re-introduction of an extracted tooth, although successful, is only temporarily so, its firmness lasting only until the absorption of the root is complete.

3370. *Kocher on a Needle in the Thumb.*—The *Wiener Med. Blätter* for May 8 contains the account of a case under the care of Professor Kocher, of Bern, where the presence of a needle in the muscles of the thumb was indicated by a sensitive galvanometer. A lady consulted Professor Kocher on Sept. 19, 1882, on account of pain in the ball of the left thumb, with the feeling as if a foreign body were in that situation. She had previously consulted another surgeon, who had made an incision, but without any result. Professor Kocher also failed to find any trace of a foreign body, and a course of electric treatment was decided on : this improved the local symptoms, but after two months tenderness in the brachial plexus was complained of. These symptoms continued, with remissions and exacerbations, until November 1883, when stretching of the median nerve was tried ; but when the sensitiveness of the parts returned, a dull feeling of pain was still present. In February 1884 the patient consulted a specialist on nervous diseases, Dr. Burckhardt, who wrote to Professor Kocher that the symptoms were clearly peripheral, not central, and that a foreign body must be present. A very strong magnet failed to give any assistance in the search, but a sensitive galvanometer indicated plainly not only the presence of a metallic body, but its position and approximate size, and it was cut down upon and removed, eighteen months after its entrance.

3371. *Removal of Sarcoma of the Spleen.*—The *Allgem. Wiener Med. Zeitung* of April 29 reports a case from Professor Billroth's clinic, in which a tumour, which proved to be a sarcomatous spleen, was removed. Before the operation some doubt was thrown on the nature of the case by dulness on percussion being found in the normal situation of the spleen, the tumour being in the mesogastrium ; but, when the abdomen was opened, this was discovered to be a portion of the liver, which had been dragged over by the weight of the tumour.

ALICE KER, M.D.

3372. *Biondi on Extirpation of the Lung.*—In 1882 Dr. Domenico Biondi, assistant to the professor of pathological anatomy in Naples, showed that removal of part of a lung is well borne in animals. He has now set himself to inquire whether the result is equally good when the part of the lung removed is affected with tubercle. The experiments were carried out on rabbits, cats, and dogs ; twenty-one animals in all. Tubercular matter was first inoculated directly into the lung of the animal ; and after a time the affected portion of the lung was removed. After the first operation (inoculation) nine animals died of septic pleuro-pericarditis, and one of extensive tuberculosis before the second operation. Four died after the second operation (excision) ; and of these the excised portion of lung showed certain evidence of the morbid process only in two. Seven survived both operations ; and of these, in five well-marked signs of tubercle were present, and in two were absent. Even in animals much weakened by the disease, the removal of the lung is successful ; and if the whole of the diseased portion be removed, the disease does not recur. Dogs do not readily become infected with tubercle. The experiments were made in Professor Schrön's laboratory in Naples, and in Professor Stricker's in Vienna.

WILLIAM R. HUGGARD, M.D.

3373. *Jatzuta on Naphthalin in the Treatment of Wounds.*—In the *Vratch*, No. 28, 1884, p. 464, Dr. K. L. Jatzuta sums up his experience in the treatment of wounds with naphthalin (used in powder, up to half-an-ounce, according to the size of the wound) as follows. 1. Healing of wounds under naphthalin dressing proceeds as successfully as under iodoform, both of the drugs being safeguards against erysipelas. (Dr. Diakonoff thinks otherwise ; *see* the LONDON MEDICAL RECORD, 1884, March, p. 111.) 2. Naphthalin does not prevent healing by the first intention. 3. Unclean, neglected, bad wounds of ulcer-like appearance rapidly improve and heal under the influence of naphthalin. 4. Naphthalin does not irritate wounds, cicatrisation proceeding without any delay ; which cannot be asserted as regards iodoform. The author never saw any toxic symptoms from naphthalin. Patients tolerate the odour of the drug perfectly well.

3374. *Lukashevitch on the Use of Sculptor's Clay in Acute Epididymitis.*—The perusal of the articles of Drs. Sokoloff, Masalitinoff, Saveljeff, and Posadsky (*see* the LONDON MEDICAL RECORD, April, 1882, p. 144; Nov., 1883, p. 452; Feb., 1883, p. 47; and Oct., 1884, p. 431), led Dr. S. Lukashevitch (*Vratch* 1884, No. 31) to apply the clay treatment in cases of acute gonorrhœal epididymitis. A complete and rapid success was obtained by the author in all his twenty-six cases, treated with the application of clay-cakes (thinly spread over a piece of linen) to the diseased testis. The dressing was changed twice daily, and continued for four or five successive days. Already, within ten minutes after the first application, acute and distressing pain became moderate, 'bearable,' and soon disappeared entirely. Swelling of the testis began to melt away from the second or third day of the treatment.

3375. *Mikulicz on Extirpation of Goître.*—Professor Mikulicz (*Przeglad Lekarski*, No. 28, 1884, and *Vratch*, No. 32, 1884) publishes thirteen cases of extirpation of goître, done with the strictest antiseptic precautions. All the cases recovered. In three of them there was observed tetany after the operation. In none of the cases was tracheotomy required. The author never performed this operation for cosmetic purposes.

3376. *Kaczorowski on Affections of the Gum in relation to other Diseases.*—Dr. Kaczorowski (*Przeglad Lekarski*, Nos. 28 and 29, 1884, and *Vratch*, No. 32, 1884) draws attention to a connection existing between gingival affections and certain other diseases. In four of his cases, chronic gingivitis caused the occurrence of hallucinations, melancholia, nervous excitement, and insanity. Extraction of destroyed teeth and appropriate treatment of the inflamed foul gums were followed, in each of the cases, by restoration of health of the nervous system. Further, the author saw several instances where affection of the gum led to general septicæmia. He thinks generally that premature senile debility of the organism may often depend upon dental caries, leading to absorption into the system of septic products of slow decomposition.

3377. *Korinfsky on a Case of Traumatic Tetanus Cured by Curare.*—In the *Meditz. Obozr.*, No. 13, 1884, p. 63, Dr. Korinfsky, of Baku, furnishes details of a case of traumatic tetanus in a labourer, aged 22, admitted with fully developed symptoms six days after receiving a contusion of a finger. Three days' administration of morphia and chloral having brought no change, the author added to the drugs subcutaneous injections of one-tenth of a grain of curare in aqueous solution twice a day. Forty-four days later, the patient left the hospital perfectly well. In all, forty injections of curare had been made—that is, about four grains of curare were used. During the same period, the patient took 30 drachms of chloral and 10 grains of morphia. Injections of curare, which were made into the arms and thighs, caused no considerable pain, and no inflammation, except on one occasion, when an abscess followed.

V. IDELSON, M.D.

3378. *Runström on Fracture of the Skull with Diabetes and Aphasia.*—Dr. Runström (*Hygiea: and Nordiskt Medicin. Arkiv*, Band xv.) relates the case of a farmer, who, while riding, fell from his horse and was kicked by the animal on the head. He was found senseless in the neighbourhood of his home. Some hours later Dr. Runström found the patient sensible, but with complete aphasia and paralysis of the right arm. Over the left parietal bone was a large wound, from which portions of brain-substance protruded; and in it was a loose piece of bone, tilted up and pressing on the brain. The pulse was full and tense, 110. There was no vomiting. The fragment of bone was removed with some difficulty, and a dressing of carbolised oil was applied. Under suitable treatment the pulse went down to 55, and the wound healed without a bad symptom. After six weeks speech began to return gradually, first by single words; and the paralysis also improved. At the end of four months he was tolerably well, although his mind was weak and his disposition mournful. During the whole time the urine contained sugar, and continued to do so.

A. HENRY, M.D.

MEDICINE.

RECENT PAPERS.

3379. QUINE.—The Significance of Jaundice in Diagnosis. (*Boston Med. Jour.*, July 3.)

3380. HEMMING.—Two Cases of Charbon Directly Inoculated from a Cow Suffering from Splenic Fever. (*Brit. Med. Jour.*, Sept., p. 560.)

3381. GAIRDNER.—On Perityphlitis. (*Med. Times and Gazette*, July, p. 6, and Sept., p. 393.)

3382. DRUMMOND.—The Treatment of Bronchitis in the Intervals. (*Practitioner*, Sept., p. 181.)

3383. PERNICE. — Purulent Peritoneal Exudation Simulating Ascites Cured by Paracentesis. (*Gazz. degli Ospitali*, No. 33, p. 258.)

3384. GALVAGNI.—On a Case of Mesenteritis in a Patient suffering from Lead-poisoning. (*Riv. Clin. di Bol.*, Fasc. iii., 1884; and *Annali Univ. di Med.*, Aug. 1884.)

3385. LAGANÀ.—A Case of Aneurism of the Posterior Wall of the Arch of the Aorta. (*Il Movimento*, Fasc. i., 1884, p. 12, and *Annali Univ. di Med.*, Aug. 1884.)

3386. CANALI AND ZAMPETTAI.—On Acute Croupous Pneumonia. (*Riv. Clin. di Bologna*, p. 40, 1884.)

3387. BUCQUOY.—Pleurisy in Diseases of the Heart. (*Gazz. Med. di Torino*, Aug. 1884.)

3388. CHATEAUBOURG.—On Physiological Albuminuria. (*Jour. de Méd. et de Chir. Prat.*, July 1884.)

3389. BONUZZI, P.—Ankylostomiasis and the Ankylostomum in the Province of Verona. (*Gazz. Med. Ital. Prov. Venete*, Aug. 30, Sept. 6, 13, 1884.)

ART. 3379. *Quine on the Significance of Jaundice in Diagnosis.*—In the *Boston Med. Jour.*, July 3, 1884, an abstract is given of a paper by Dr. Quine on 'The Significance of Jaundice.' Some of the chief points to be gathered are as follows. 1. Jaundice occurring suddenly, in apparent health and painlessly, is usually of emotional origin and transitory. 2. If it occur suddenly, and be preceded by paroxysmal pain and vomiting, it is caused in nine cases out of ten by biliary calculi. 3. Impassable obstruction of the common duct is shown by great intensity of jaundice, clay-coloured stools, and in recent cases by distension of the gall-bladder. 4. Sudden return to normal coloration of the fæces confirms the diagnosis of obstruction. 5. Absence of jaundice does not imply absence of hepatic disease, since the liver may be destroyed by disease or extirpated by operation, without jaundice ensuing.

3380. *Hemming on Two Cases of Charbon directly Inoculated from a Cow suffering from Splenic Fever.*—Mr. J. H. Hemming, in the *Brit. Med.*

Jour., Sept. 1884, p. 560, relates two cases of 'charbon,' or 'malignant pustule,' directly inoculated from a cow suffering from 'splenic fever.' Two men dressed and skinned a cow that had been killed owing to its being feverish. A dog and cat who had eaten of the entrails of the cow died during the night, and the veterinary surgeon ordered the cow to be buried. Ten days later, both the men who had dressed the animal came with typical signs of 'charbon.' One was a farmer and a free-liver, the other a labourer. The farmer suffered from great constitutional disturbance, whilst the labourer suffered but very little, except from the local sore. Mr. Hemming treated both alike, injecting under the eschar a syringeful of pure carbolic acid; making, a few hours afterwards, an incision through the eschar and pouring carbolic acid into the wound. The farmer's life was despaired of for some days, as delirium tremens set in; the labourer, on the other hand, soon recovered; he was placed on milk-diet for a day or two, then returned to his ordinary food of pork and pudding. Mr. Hemming draws attention to the coloured plate of a typical case of charbon lately published by Mr. Morrant Baker in the *Brit. Med. Jour.*, June 1884, p. 434, and states that in his, as in Mr. Baker's case, the incubation period lasted twelve days.

3381. *Gairdner on Perityphlitis.*—The *Med. Times and Gazette*, July 1884, p. 6, and September 1884, p. 393, publishes a clinical lecture by Dr. W. T. Gairdner on the subject of peritonitis of the lower abdomen. A case is given, showing how a married woman may suffer for several weeks from subacute and widely diffused peritonitis, without once adverting to its probably pelvic origin; and another case is mentioned by the author, which came under his notice many years ago, where a lady in a good social position was supposed to have died from pneumonia, and at the *post mortem* examination it was discovered that the lung-disease was very partial, but that there was general peritonitis, matting together the intestines, especially at the lower part of the abdomen. The author then examined the vagina, and found what proved to be a stem-pessary completely embedded in the vaginal and uterine tissues, and encrusted all over with metallic rust and salts, thus showing that its very existence had been forgotten. The long-continued pelvic irritation had broken up the patient's general health, and had led to the peritoneal and pulmonary disease. With regard to the treatment of cases of perityphlitis, the author insists on absolute rest to the abdomen, with abstinence from the use of purgatives, the administration of opium, and limitation of diet. Enemata, if employed at all, should be only such as to empty the rectum, and to enable the patient to be fed by the rectum if food cannot be retained in the stomach.

3382. *Drummond on the Treatment of Bronchitis in the Intervals.*—In the *Practitioner*, September 1884, p. 181, Dr. D. Drummond contributes a paper on the treatment of bronchitis during the intervals between the attacks. Many patients consider that, when the danger of an attack of bronchitis has passed, there is no need to consult their medical adviser, and that they are quite well again; but this is far from being the case; the latent cause, of which the bronchitis is only a secondary consequence, is still present, and it is during the interval that the curative treatment is most available. Dr. Drummond cites examples of cases in which great benefit was derived, by giving the patient caution as to the mode of living, and taking exercise. Persons who live in heated rooms, and screen themselves from every draught of air, sometimes become so susceptible that even accidental cooling of the apartment in which they constantly reside may prove serious. It is necessary to keep up the circulation, and give tone to the digestive organs, by indulging in moderate exercise in the open air.

RICHARD NEALE, M.D.

3383. *Pernice on Purulent Peritoneal Exudation simulating Ascites Cured by Paracentesis.*—In a case presenting the symptoms of free ascites, Pernice performed paracentesis and found that the liquid extracted (18 litres) was purulent. The interest of the case consists in the enormous quantity of purulent exudation, the general state being good, with absence of fever and successful termination. The paracentesis was repeated at intervals of about two months, less pus being withdrawn at each time. After the third operation, the patient resumed his usual occupations. Two years and a half afterwards, there was found a purulent collection, sacculated in the lower belly, which was successfully operated on. The author insists on the rarity of chronic purulent peritonitis, which is almost always secondary to neoplasiæ, and has generally but scanty and sacculated exudation. He explains the absence of fever in this case, by supposing that the thickened serous membrane, covered with false membranes, perhaps stratified, lent itself little or not at all to absorption. After the paracentesis, palpation of the belly gave a feeling of diffused resistance, which he ascribes to the pseudo-membranes. The rapid reproduction of the purulent exudation would tell against the theory of Cohnheim on the emigration of leucocytes as the cause of the formation of pus; more probable, according to the author, is the conception that from some reason, as yet unknown, rapid division of the migrated cells takes place. As to the mode in which cure was effected, he believes that, after the third paracentesis, the tonicity of the vessels of the serous membrane and of the organised pseudo-membranes was recovered, the exudation in part reabsorbed, in part transformed; that it underwent fatty degeneration and was deposited in caseified masses in the depth of the pelvis.

3384. *Galvagni on a Case of Mesenteritis in a Patient suffering from Lead-poisoning.*—A man, aged 54, had been working with lead-colours for eleven years. For many years he had been subject to abdominal pains, and for several months to very severe colic, accompanied by headache, constipation, and vomiting. He had the blue line on the gums, muscular atrophy of the limbs, and the abdomen retracted transversely in the epicolic and inferior limits of the epigastric regions; over the whole abdomen there was pain and great and anomalous resistance. In the last days of his life vomiting was constant, with constipation, and acute pain in the region of the stomach, œdema of the limbs, especially of the arms. At the *post mortem* examination were found perihepatitis and perisplenitis, with total adherence of the stomach, liver, and spleen to the vault of the diaphragm, sclerosis of the whole great epiploon, chronic sclerotic mesenteritis, with general retraction of the intestines, sclerosis of the solar plexus, chronic catarrh of the œsophagus, stomach, and duodenum, brown atrophy of the liver, granular atrophy of the kidneys, pulmonary œdema, and cerebral anæmia. In this case, says the author, the process

of poisoning having been slow, its chronicity had, it may be supposed, permitted the development of the unusual inflammatory alterations found in the abdomen, which again may be subordinated to the sclerotic state of the ganglionar nerves, which are known to preside over the innervation of those parts. Another similar case is related by the author, although not followed by necropsy. A painter, aged 30, many years before coming under observation, had been treated for colic and ascites. The attacks of colic continued, and were associated with pains in the joints and weakness of sight, which was ascribed to neuro-retinitis, probably saturnine in character. Physical examination showed this particularity; on pressing with the hand on one side of the abdomen, the right especially, the intestinal coils were seen to glide towards the opposite side, especially during profound inspiration, because of their greater inturgescence there. The author thinks that here also there had been a mesenteritis, which has the property of englobing the whole mass of intestine, and rendering it movable *in toto* under the pressure of the hand. The preceding ascites in this case might have been due to a peritonitic process, but especially to a mesenteritis, by compression of the veins of the mesenteric duplicature. The author says that, if his cases be not accidental merely, mesenteritis is a possible sequence of chronic lead-poisoning, and it might be possible to establish a relation between it and the attacks of colic.

3385. *Lagand on a Case of Aneurism of the Posterior Wall of the Arch of the Aorta.*—Aneurism of the anterior and superior wall of the arch of the aorta is more frequent than that of the posterior and inferior wall: perhaps the absence of objective signs to make the diagnosis of these last contributes to this belief, and aneurism of this part may not be so rare as supposed. The author saw, with Professor Cardarelli, an engineer, aged 53, who presented symptoms of atheroma of the aorta with hypertrophy of the left ventricle. The patient had suddenly lost his voice after exposure to cold, and had an irritative cough. Careful examination, guided by the suspicion that there might be an aneurism of the arch of the aorta, gave no result which could justify this hypothesis. Only along the sternum was heard a slight diastolic murmur, which, starting from the left sterno-clavicular articulation, was diffused to the level of the insertion of the fourth sternal cartilage of the left side, when it was heard with some intensity, but it could not be heard at the apex nor over the aortic valves. The pulse was normal, and no pulsation could be felt even on forced expiration. The tracheal tube, however, was slightly shaken by a rhythmic impulse, scarcely sensible, which certainly was not transmitted by the arteries of the neck, but proceeded from within the thorax. With the laryngoscope no hyperæmia or catarrh was to be seen, but there was paralysis of the left vocal chord, due to compression. By these symptoms alone aneurism of the posterior wall of the arch of the aorta was diagnosed. The patient died three months later from rupture of the tumour into the trachea. From this case the author draws these conclusions. 1. Pulsation of the laryngo-tracheal tube is an important symptom in aneurism of the posterior-inferior part of the arch. 2. Although not always, this pulsation may occur with simple cases of atheroma and aortic dilatation, with or without disease of the semilunar valves; but it is a pathognomonic sign of aneurism when it is accompanied by phenomena of stretching and of pressure of the recurrent or of the inferior laryngeal. 3. In these aneurisms the nervous phenomena and the pulsation of the laryngo-tracheal tube cannot be separated, and both are always contemporaneously developed. In the case observed by the author, dysphagia was absent; this is possible when the aneurism is developed in the first segment of the arch, in the point nearest to the trachea. In this case there may be pulsation of the laryngo-tracheal tube without compression of the œsophagus, which, less resisting, more movable, and more compressible than the trachea, is found a little more behind and more to the left. The author insists on the importance, first noticed by Cardarelli, of pulsation of the laryngo-tracheal tube as a diagnostic sign.

3386. *Canali and Zampettai on Acute Croupous Pneumonia.*—The authors made a series of experiments on rabbits to examine the hypothesis of Silvestrini that pneumonia is a progressive disease which extends like erysipelas, and that to every diffusion of the process corresponds a new invasion of the malady. To inject as deeply as possible the liquids used in the experiments tracheotomy was performed, and through the aperture thus obtained a long, fine elastic tube was passed down the trachea into the bronchi; to this tube was connected a Pravaz's syringe. In this manner were made injections of pneumonic and tubercular sputa, the pus of a pyo-pneumothorax, the secretion of acute bronchial catarrh, liquid containing bacterium termo, urine, white wine, ammonia, solution of gum, acetic acid, and distilled water. From the injection of pneumonic sputa were obtained not only croupal pneumonia, but also pleurisy and pericarditis. The injection of the other matters gave rise only to limited pneumonic patches, catarrhal or croupal. The injections of the solution of gum, however, caused a very extensive pneumonitis with pleuritis and subpleural hæmorrhage of the opposite side. In all the other experiments, the lesion was on the same side as the injection. They obtained the gravest lesions with pneumonic sputa and with the solution of gum, liquids which have the common property of being viscous and therefore difficult of expulsion.

3387. *Bucquoy on Pleurisy in Diseases of the Heart.*—Pleurisy in heart-diseases most often affects the right side; the liquid is serous, rarely purulent, and its quantity is less than might be expected when compared with the dropsies occurring in other parts of the body. Taking cold is a common cause, the need of fresh air to facilitate their breathing leading the sufferers to sit in draughts. Pulmonary hæmorrhages and infarcts are a frequent cause, their site being superficial and accompanied by inflammatory phenomena. This observation is confirmed by the fact observed by the author, that pleurisy is more frequent in aortic than in mitral disease. Pulmonary apoplexy and the infarcts which are the common cause, are observed more especially in patients affected by atheromatous lesions of the aorta, and are accompanied by inflammatory symptoms, giving rise to retrosternal pain and pseudo-anginal symptoms. Pleurisies are not only met with in the cachectic period properly so-called of heart-disease, but in a less advanced period of the disease, and following the ordinary phenomena of asystolia. The pleurisies of heart-disease are latent and subacute in character, and may easily pass unnoticed if the patient be not carefully watched, and if the effusion

be circumscribed and scanty. These pleurisies, however, add to the gravity of the prognosis ; they increase the dyspnœa, oppression, and palpitation, and if there be asystolia the pleurisy may render it permanent, and precipitate the course of the disease. The effusions, however, are curable, and their deleterious influence renders their prompt removal desirable. For this, the question of thoracentesis presents itself. When the pleurisy manifestly aggravates the cardiac affection, time must not be lost. The indication is formal if, with even inconsiderable effusion, there be intense dyspnœa and aggravation of the condition of the patient. It is not, however, necessary in all cases, and sometimes digitalis may render valuable service.

3388. *Chateaubourg on Physiological Albuminuria.*—The subjects of the author's researches were mostly soldiers in good health and children. The analyses of the urine were made chiefly by Tanret's reagent, double iodide of mercury and potassium strongly acidulated with acetic acid, employed according to the method of Professor Bouchard. The process is very delicate, and this is essentially necessary, since in a great number of cases not more than 5 milligrammes to a centigramme of albumen was found in a litre of urine. The general results obtained by the author are these. Albumen in healthy persons seems extremely frequent, since in 701 analyses of the urine of perfectly healthy persons albumen was found 592 times, or in 84 per 100. In 64 per cent., albumen was found in the proportion of 3 centigrammes per litre. In 169 cases, with ordinary processes, 25 centigrammes per litre were found. This physiological albuminuria is extremely variable, and is influenced by many circumstances of ordinary life : thus, 25 centigrammes of albumen per litre may be found on one day, and on the next, in the same person, there may not be even a trace. The quantity of albumen is modified by fatigue, which increases it sensibly, as may be observed in soldiers on a field day, or in many youths preparing for examination. Digestion, if this take place during rest, has not a great influence on physiological albuminuria. But the same cannot be said of the exercise of the genital functions or of menstruation, which have a very manifest influence. Cold baths act with an exceptional intensity. Albuminuria, differing however in degree, was found in every one of 53 persons examined after a cold bath. In 16 of these, previous examination had shown that there was no trace of albumen before taking the bath. In all the others, the proportion of albumen was notably increased. There is reason, then, to affirm that the cold bath in the majority of people produces a considerable increase of the quantity of albumen normally existing in their urine, and that it causes it to appear in those who before taking the bath had no trace of albumen in their urine. In the greater number of these cases on the day following there was still albumen in the urine, but in much smaller proportions. This question of the cold bath has a special importance, for if it be admitted (with Professor Semmola) that the repeated passage of albumen through the renal filters may cause alterations of the kidney, it is evident that in all individuals who present physiological albuminuria the use of cold baths and prolonged sea-bathing must be carefully supervised, and the urine frequently and carefully examined.

3389. *Bonuzzi on Ankylostomiasis and the Ankylostoma in the Province of Verona.*—The ankylostoma is widely diffused in Italy, and is endemic in the province of Verona. By its presence in the human intestine it may give rise, without any other complicating cause, to profound anæmia. The anæmia is not so much caused by the quantity of blood consumed by the parasite, as by the irritative action which its bite causes to the mucous membrane of the duodenum and jejunum. The ankylostoma, even when in large quantities, cannot consume daily more blood than the economy can afford, without grave harm to the organism. The ankylostoma being found chiefly in malarial localities, and in the galleries of mines and other tunnels, where the air from various causes is vitiated, the anæmia met with in those who are obliged to live and work in these places, and who harbour the ankylostoma in their intestines, must be attributed to complex causes, of which the ankylostoma is always a very grave concomitant. It is possible for the ankylostoma to live in considerable numbers in the human intestines without giving rise to grave morbid consequences. Reviewing the various instances of the prevalence of ankylostomiasis, Bonuzzi regards the anæmia of the workmen of Belfiore as being due principally to the ankylostoma, malarial infection being an important complication. The anæmia of the kiln-workers of Parona was a true typical ankylostomo-anæmia without complications. The anæmia of the St. Gothard was chiefly due to the very deleterious air of the tunnel, the ankylostomum being, however, an important concomitant cause. The anæmia of miners also may be greatly due to the ankylostoma, and may be even epidemic in character. Before the anæmia can be cured, the parasite must be expelled, and for this the ethereal extract of male fern, as recommended by Perroncito, is the most efficacious drug. It should be given in the morning fasting, and preceded on the day before by a good purgative. Perroncito gives very large doses, 15 to even 30 grammes a day, repeating them until the ova have completely disappeared from the fæces. Bonuzzi says these large doses are not necessary, and that he has frequently seen jaundice from duodenal catarrh follow their administration. He prefers to give the male fern, made up into pills or small boluses, with magnesia, which may be wrapped in a wafer at the time of taking. Thus given, it may be repeated for three or four or more days consecutively, a careful examination of the fæces for the ova being made daily. At the same time, iron, quinine, and good diet must be given. Important also is the prophylaxis, cleanliness and good drinking-water being essential. G. D'ARCY ADAMS, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

3390. CHUTE. — Hazeline in Menorrhagia. (*Practitioner*, August 1884.)

3391. BRACHET.—The Waters of Aix-les-Bains in Rheumatoid Arthritis. (*Brit. Med. Jour.*, August, p. 411.)

3392. BEALE.—Cystine in the Urine. (*Lancet*, August, p. 363.)

3393. BEVERLEY. —The Treatment of Hay-Asthma. (*Brit. Med. Jour.*, September, p. 465.)

3394. O'CONNELL.—Glycerine Nasal Plugs in Hay-Fever. (*Brit. Med. Jour.*, September, p. 531.)

3395. Howe.—The Treatment of Night-sweats in Phthisis. (*Lancet*, September, p. 408.)

3396. Startin.—Treatment of the Bite of the Harvest Bug. (*Lancet*, September, p. 439.)

3397. Johnson.—The Uncertain Composition and Action of Grey Powder. (*Lancet*, September, p. 568.)

3398. Brandt.—Warmth and Eserine in Traumatic Tetanus. (*Practitioner*, October, p. 255.)

3399. Phosphorus in the Treatment of Tubercular Disease. (*Med. Times and Gazette*, October, p. 477.)

3400. Aitken.—Fresh Lemons as an Antipyretic. (*Brit. Med. Jour.*, October, p. 653.)

3401. Grigorieff, A. Kh., and Musykantoff, A. G.—A Contribution to the Question of the Use of Faradisation in Intermittent Fever. (*Russkaia Meditzina*, 1884, No. 29, pp. 595–6; and No. 30, pp. 615–20.)

3402. Troitzky, S.—Jequirity in Hospital Practice. (*Russkaia Meditzina*, No. 30, 1884, p. 618–20.)

3403. Slavatinsky, A. J.—On the Pharmacological Action of Hydrastin. (*Meditz. Obozr.*, No. 16, 1884, pp. 346–48.)

3404. Andruzski, E. J.—A Contribution to the Question of the Therapeutic Use of Paraldehyde in the Insomnia of Insanity. (*Arkhiv Psykhiatriee*, &c., 1884, Vol. iv., Fasc. i., pp. 1-18.)

3405. Finkelstein, L. O.—Salicylate of Soda in Migraine. (*Vratch*, 1884, No. 29, pp. 487-90.)

3406. Jarnovsky, J. V.—On the Treatment of Anthrax. (*Vratch*, No. 35, 1884, pp. 598–99.)

3407. Bogush, O. J.—The Treatment of Diarrhœa by Resorcin and Salicylic Acid dissolved in Castor-oil. (*Meditz. Obozrenie*, 1884, No. 14, pp. 164–7.)

3408. Krasovsky, A. S.—On Malarial Cachexy and its Treatment. (*Russkaia Meditzina*, No. 27, 1884, pp. 566-8.)

3409. Shkolnik, D.—On Burnt Alum in Intermittent Fever. (*Russkaia Meditzina*, No. 29, 1884, pp. 596–9.)

Art. 3390. *Chute on Hazeline in Menorrhagia.*—In the *Practitioner*, August 1884, p. 141, Mr. M. Chute describes a valuable remedy for menorrhagia, which is a very frequent ailment in women in Cape Colony. Two drachms of hazeline, given twice or thrice a day, will act so quickly that it is not necessary to anticipate the flow; but when menstruation, after it has lasted the ordinary time, is not closing naturally, hazeline, given as above, will effectually restrain it, and after hæmorrhage has ceased there is no advantage in continuing the drug. Another good result produced by hazeline is, that it relieves the pain of dysmenorrhœa in a very quick and marked manner.

3391. *Brachet on the Waters of Aix-les-Bains in Rheumatoid Arthritis.*—In the *Brit. Med. Jour.*, August 1884, p. 411, is published a paper by Dr. Brachet, on rheumatoid arthritis and its treatment at Aix-les-Bains. The waters of Aix may be taken internally; they are easy of digestion, producing neither sickness nor irritation; they promote and increase urinary secretion, and eliminate urea, uric acid, and the phosphates. The exact quantity of mineral water requisite for each patient varies, three or four tumblers generally sufficing. Every kind of douche can be obtained at Aix, local or general; also vapour-baths, which may be local or general, the patient sitting and reading while one arm or leg is exposed to the vapour. There is also a large swimming bath for patients, who can exercise their limbs for a longer or shorter time, according to orders. The author narrates two cases of rheumatoid arthritis cured by the treatment at Aix-les-Bains, and draws the following conclusions. 1. The treatment at Aix ought to be tried even in the latest stages of the disease. 2. The weaker and slower treatment is preferable to the more violent in the later stages. 3. Improvement is always slow, and therefore patients should undergo renewed treatment, even when the results of the first appear negative.

3392. *Beale on the Treatment of Cystine in the Urine.*—Professor Beale, in the *Lancet*, August 1884, p. 363, recommends large doses of carbonate of ammonia in cases of cystine in the urine. A case is reported of a man, aged 30, who for four years had suffered from lumbar pain and discomfort about the thighs, especially on exertion. About two years after the commencement of the symptoms he suffered from a fixed pain in the left groin, and soon afterwards several stones were passed. One, however, being too large to pass, was crushed. Dr. Beale put the patient on carbonate of ammonia, gradually increasing the dose until it amounted to about 50 grains a day. For twelve months, the patient took on an average 55 grains a day. During this time, he did not pass as many calculi as he had previously passed in a month. The next year he took about 35 grains a day, and the following year about 20 grains daily. The ammonia not only diminished the formation of the cystine, but the patient found that while he was taking it his bowels acted freely, though previously he had been troubled with constipation. Gradually the number of calculi became less, and the author states that three or four years have passed since a stone was found. A further trial of the drug is recommended in these cases. A solution of from ten to fifteen grains per ounce may be taken without difficulty; and where the heart's action is very feeble, it can be given in doses of 15 grains every hour.

3393. *Beverley on the Treatment of Hay-Asthma.*—Mr. W. H. Beverley, in the *Brit. Med. Jour.*, Sept. 1884, p. 465, writes that he finds a powder composed of six drachms of each of the following—viz., datura tatula, stramonium, cannabis indica, and lobelia inflata, mixed with one ounce of powdered nitre and a half drachm of eucalyptus oil—burns well, gives off dense fumes, and affords great relief during asthmatic attacks. A teaspoonful burnt in the bedroom will often enable a patient to sleep. It only relieves the asthma, not the nasal catarrh, sneezing, or coryza.

3394. *O'Connell on Glycerine Nasal Plugs in Hay-Fever.*—Dr. M. D. O'Connell, in the *Brit. Med. Jour.*, Sept. 1884, p. 561, describes a method for the cure of hay-fever. It consists in the introduction into each nostril of a small piece of cotton-wool saturated with glycerine. Usually in from ten to fifteen minutes great relief is felt, but the wool should not be removed for one hour. The use of a glycerine-plug causes a copious watery discharge, followed by subsidence of any congestion; and the author suggests its application to any congested mucous membrane, whether vaginal, rectal, urethral, nasal, buccal, or conjunctival.

3395. *Howe on the Treatment of Night-Sweats in Phthisis.*—In the *Lancet*, Sept. 1884, p. 408, Mr. J. E. Howe narrates the experience he gained in the treatment of night-sweats in phthisis, during six months' residence at the City of London Hospital for Diseases of the Chest. In many cases, six to twelve minims of strychnia solution were prescribed as a night draught, and in most of them it succeeded admirably. Nitrate of pilocarpine, in doses varying from one-twentieth to one-eighth of a grain, produced good results in many cases; but in some the

action of the draught was not of long duration, and had to be repeated in the middle of the night. Oxide of zinc, in doses of from five to ten grains, was fairly successful. Mr. Howe concludes that strychnia and pilocarpine are nearly as sure in their action as atropia, and they are free from the great drawback to atropia—namely, the dryness of the throat produced, which tends also to increase the cough. If atropia be used, it is better to prescribe it in the fluid form, as the pill may not be dissolved in the stomach.

3396. *Startin on the Treatment of the Bites of the Harvest-Bug.*—Mr. Startin, in the *Lancet*, Sept. 1884, p. 439, writes that he has been staying at Hythe near Folkestone, and, being troubled by bites from the harvest-bug, found a liniment composed of a drachm of spirits of chloroform and camphor, and two grains of bichloride of mercury to four ounces of water, a good application to allay the irritation. A little camphorated oil rubbed into the skin of the legs and arms will generally prevent the attacks of this insect.

3397. *Johnson on the Uncertain Composition and Action of Grey Powder.*—In the *Lancet*, September 1884, p. 568, Dr. George Johnson writes that he has for a long time discontinued using hydrargyrum cum cretâ, as he found its operation to be most uncertain and variable. The *Pharmaceutical Journal*, Sept. 20, p. 230, contains a report on commercial specimens of hydrargyrum cum cretâ. Out of twelve specimens of grey powder analysed, not one was found free from the oxides of mercury. The presence of these oxides, in the proportion of from 2 to 6 per cent., accounts for the violent action sometimes produced by the drug. The mercuric oxide, meeting with hydrochloric acid in the stomach, would be at once converted into the poisonous perchloride. A freshly prepared specimen of the drug might contain no oxide, but in a month a difference would be perceptible, and in three months still more so, and in time there is no saying to what point the oxidising process might reach.

3398. *Brandt on Warmth and Eserine in Traumatic Tetanus.*—Dr. Brandt, in the *Practitioner*, Oct. 1884, p. 255, publishes a case of traumatic tetanus treated with eserine and local warmth and moisture. The patient, a cook aged 23, whilst cleansing a fresh turbot, cut the tip of his left thumb. The wound was dressed with strips of adhesive plaster, and wrapped in carbolised oil bandages. Three days afterwards, the dressings were removed, the wound was doing well, and was healed at the end of a week. Ten days subsequent to the accident the patient caught a severe cold from exposure, and gradually the muscles of the legs, back, chest, throat, and the masseters became stiff. Rigidity rapidly increased, and large doses of bromide of potassium with chloral were given, with hypodermic injection of morphia, which gave the patient a quiet night. The next day the rigidity became worse, and violent convulsions set in; the bromide and morphia failing to produce rest. The author then commenced the hypodermic use of one milligramme of the sulphate of eserine every hour. At the end of seven hours, finding no relaxation, two more injections were given, each containing two milligrammes, with an hour's interval between each. At 11 P.M. half a grain of morphia was also given hypodermically. With the object of relieving pressure on the nerves of the injured thumb, the part was kept constantly in a vapour-bath, by wrapping round hot compresses covered with oiled silk. The next day the patient was slightly better. The eserine was now given by the mouth in centigramme doses every two hours. At night an ice-bag was applied to the spine, and half a grain of morphia given hypodermically. Improvement gradually showed itself, and the eserine was continued for three days; then bromide of potassium was again given. Twenty-five days after the first symptoms of rigidity commenced, the patient was convalescent. [In sect. 1325 : 5 of the *Medical Digest*, many cases in which eserine has been used with more or less success are quoted.—*Rep.*]

3399. *Phosphorus in the Treatment of Tubercular Disease.*—In the *Med. Times and Gazette*, Oct. 1884, p. 477, an article appears, drawing attention to the recent publication of a paper, in which it was stated that a certain preparation of phosphorus was of great service in curing cases of tubercular meningitis. Such was the rush made on this preparation, that three days after the publication of the paper the whole of the stock then in the hands of the manufacturers, as well as of the retail dealers, was exhausted. Statements similar to those that lead to this result must be received with caution, as cases of complete and permanent recovery from tubercular disease, even of the lungs, are rare; and consequently, if the disease attack the more delicate structures of the brain and meninges, cases of recovery must be even still more rare. Indeed, their total is so few, and their occurrences so far between, that one is forced to the conclusion that recovery, when it does take place, is in spite of, rather than because of, any therapeutic measures which may have been used. Phosphorus is useful as a 'nervine' tonic in cases of nervous headache and languor, occurring in some young people of a tubercular diathesis, also in certain forms of neuralgia, and especially in the neuralgia of nursing women, to whom the usual hæmatinics have perhaps been given in vain. Here it frequently acts like a charm. The possibility of its action as a directly curative agent in cases of tubercular disease is suggested by a consideration of the results claimed for phosphorus in the treatment of rickets. Since 1879, Kassowitz alleges that he has treated 560 rachitic children by the plan of gradually increasing the dose of phosphorus, giving $\frac{1}{120}$ to $\frac{1}{60}$ of a grain a day, with remarkable and uniform success. Further research is needed in the administration of the drug in cases of tubercular meningitis before any hope can be held out that a remedy has been discovered for this fatal disease. [The curability of tubercular meningitis is an oft mooted question. Trousseau knew only of two cases. Dr. Inman says 90 per cent. are remediable (*vide* sect. 1357 : 6, *Medical Digest*). The use of phosphorus and its compounds, in the treatment of tuberculous diseases is fully noted in sect. 700 : 5, *Medical Digest.—Rep.*]

3400. *Aitken on Fresh Lemons as an Antipyretic.*—Dr. Aitken, in the *Brit. Med. Jour.*, Oct. 1884, p. 653, states that he has found great benefit in using a decoction of lemon, as suggested by Dr. Maglieri in 1882. It reduces the temperature in cases of ague quite as well as quinine, and does not produce any bad effects. It is also useful in cases of enteric fever. It is prepared in the following manner. A freshly gathered, unpeeled lemon is cut into slices and put into three teacupfuls of water; this is boiled down to one cupful in a clean earthenware jar, and allowed to stand overnight in the open

air, and given the first thing in the morning, after the liquid has been separated from the rind, pulp, and seeds. It does not seem necessary to give more decoction than is prepared from one lemon each day. The only drawback is that a freshly gathered lemon is necessary; and, until the active principle contained in the decoction is extracted, the remedy is useless in countries where the lemon-tree does not grow.

RICHARD NEALE, M.D.

3401. *Grigorieff and Musykantoff on Faradisation in Intermittent Fever.*—Drs. A. Kh. Grigorieff and A. G. Musykantoff, of Temir-Khan-Shura (*Russkaia Meditzina*, Nos. 29 and 30, 1884) tried the faradic treatment in forty cases of malarial fever. The patients were divided into two equal groups. The first group was treated by local faradisation in the splenic region, the sittings being of fifteen minutes' duration and repeated daily. The second group was subjected to general faradisation (with electrodes in the patient's hands), lasting half an hour, twice daily. In both instances, the current was supplied by Dubois-Reymond's sledge apparatus with one Grove's cell, and was as strong as the individual patients could bear. When no improvement was observed, electrisation was supplemented by the administration of quinine, at first in eight-grain doses, subsequently in sixteen-grain doses. The results obtained by the authors were these. In the *first* series of twenty cases (consisting of fourteen cases of the quotidian variety, two of tertian and four of quartan), eight patients were cured by faradisation alone, on an average after five sittings. In the remaining cases the addition of quinine proved necessary; in four of them cure ensued from electricity (on an average, after fourteen sittings) and eight-grain doses of the drug; in eight, from electricity and sixteen-grain doses of quinine. In fourteen of these twenty cases there was present an enlargement of the spleen; in all of them, the authors invariably observed contraction of the organ under the influence of electric current [and thus confirmed the experience of Chvostek, Wagner, Harless, Jaschkowitz, S. P. Botkin, Shtchegloff (*see* LONDON MEDICAL RECORD, April 1882), V. F. Sprimon, &c.]. The *second* series consisted of eight cases of quotidian fever, five of tertian and seven of quartan. Seven cases were cured by general faradisation alone and eight-grain doses of quinine, and in five cases faradisation was stopped to give place to the use of quinine alone (in sixteen-grain daily doses). The general conclusions at which the authors arrived are as follows. 1. The electric current undoubtedly produces a certain influence in intermittent fever. 2. In some cases, a complete cessation of paroxysms may be obtained by faradisation alone. 3. In such cases, cure follows pretty rapidly. 4. When faradisation proves effective, it cures both mild and severe cases without any regard to the type of fever. 5. With some rare exceptions, faradisation does not bring about any diminution in the intensity of the paroxysms. 6. The percentage of cures is not so considerable as to enable faradisation to supersede quinine. 7. Local faradisation produces contraction of the spleen, while general faradisation remains without any influence on the bulk of the organ. 8. Returns of the disease occur after the faradic treatment as often as after quinine. 9. The form of the application of faradisation has no significance for the issue of the treatment. 10. General faradisation is preferable, since it involves less trouble and waste of time than local application. According to the authors, Professor Shipulinsky was the first in Russia who, in 1854, began to treat intermittent fever by faradisation; he cured sixteen cases of intermittent after one sitting in each instance. (*See* the *Proceedings of the St. Petersb. Russ. Med. Soc.*, 1854, vol. v., p. 217.) This plan found an ardent sympathiser in Dr. Krasnogladoff, of Tiflis, who in twenty days cured forty-four patients with non-malignant Caucasian malarial fever. Later on, Dr. Tchulovsky, of Dagestan, published nine successful cases in the *Kavkazsky Meditzinsky Sbornik*, No. 26, 1878.

3402. *Troitzky on Jequirity in Trachoma.*—Dr. S. Troitzky, of Kherson (*Russkaia Meditzina*, No. 30, 1884) used a cold infusion of jequirity seeds (prepared after Wecker's method, somewhat modified by the author) in fifty-one cases of trachoma. In sixteen cases complete cure followed (in three to seven months) with superficial cicatrisation; in nineteen cases, a considerable improvement was obtained; in eleven, the conditions remained unchanged; and in four, no specific inflammation appeared. The results are summarised by the author thus. 1. Infusion of jequirity, in the majority of cases, brings about an inflammation, *sui generis*, which, as well as its intensity, is not dependent upon the strength of the infusion, and cannot be localised at a desirable spot of the conjunctival sac. 2. The inflammation, on its being repeatedly produced, in some of the cases leads to a superficial cicatrisation of trachomatous granulations, and in certain cases of pannus restores a good condition of the cornea. 3. The lower transitory fold of the conjunctiva always becomes smooth after the jequirity inflammation. 4. Jequirity is one of the most powerful remedies for trachoma, and must be regarded as a valuable addition to the means against this obstinate disease.

3403. *Slavatinsky on the Pharmacological Action of Hydrastin.*—In the *Meditz. Obozr.*, No. 16, 1884, p. 346, Dr. A. J. Slavatinsky describes his experiments carried out at the Pharmacological Laboratory of St. Petersburg Military Medical Academy on the action of hydrastin on frogs. He used Merk's hydrastin (one of the alkaloids of the root of *Hydrastis canadensis*), in the shape of a whitish crystallinic powder insoluble in cold water, but easily soluble in acidulated water. Its hypothetic formula is $C_{22}\ H_{23}\ NO_6$. The author's experiments show that in subcutaneous doses of 1 to 2 milligrammes, hydrastin in five to ten minutes produces a disco-ordination of movements, general sluggishness and weakness, slow response to stimuli, acceleration of respiration, reduction of frequency of the heart's action to one-third or one-half, while individual contractions remain very energetic. By the end of half an hour all the phenomena disappear. In subcutaneous doses of 3 to 5 milligrammes, the alkaloid in three to ten minutes causes the appearance of general convulsions, resembling those of strychnine poisoning, and disappearing after division of the spinal cord. The cardiac changes are the same as from smaller doses, but more intense; the heart's action is interrupted by diastolic arrests. Doses of 5 milligrammes to 1 centigramme act on frogs fatally, death being preceded by a short convulsive period, followed by prostration and paralysis. The heart invariably stops in diastole. The changes in the cardiac action remain identical in atropinised animals, as well as in animals with the spinal cord divided. When placed in a weak solution of hydrastin the heart rapidly stops in diastole

never to answer any subsequent stimulations. Hence the author concludes that the cardiac changes are dependent not only upon the action on the pneumogastric nerve, but also upon the cardiac ganglia and muscle. The examination of reflexes shows a considerable increase of reflex action, depending upon the excitation of the spinal reflex centres. The irritability of the motor nerves is increased in consequence of the action of hydrastin on the nerve-stems and endings. In the sensory sphere, hydrastin brings about a depression of sensibility, especially a rapid loss of susceptibility to pathic stimuli, which phenomenon is probably caused by the action of the alkaloid on the peripheral endings of sensory nerves. A few experiments on warm-blooded animals showed that, in hypodermic doses of 2 centigrammes per kilogramme of the animal's weight, hydrastin produces a considerable retardation of the cardiac action, discoordination of movements (especially of the posterior limbs), general depression, and incessant tremor. The arterial tension remains almost unchanged (while Dr. Fellner, of Vienna, found an initial fall with a subsequent rise). Larger doses cause death with paralytic symptoms.

3404. *Andruzski on Paraldehyde in Sleeplessness of the Insane.*—In the *Arkhiv Psykhiatriee*, &c., Vol. iv., Fasc. i., 1884, p. 1, Dr. E. J. Andruzski, senior physician of the Odessa Lunatic Asylum, publishes his observations on the action of paraldehyde in the sleeplessness of insanity. The drug was given at bedtime in half-drachm doses, with half an ounce of aqua naphæ and as much of syrupus aurantiorum. The results at which the author arrived are these. 1. Paraldehyde generally produces a good hypnotic and sedative action in insomnia of the insane, but it does not prove useful, or even proves harmful, to the general state in patients suffering from psychoneuroses with agrypnia, and in all 'nervous' or 'hysterical' subjects. 2. In half-drachm doses, paraldehyde does not bring about any untoward gastro-intestinal complications (such as are observed in the case of opium, morphia, and chloral); but when administered in large doses and for a long period (*e.g.* in one-drachm doses for three successive weeks), it produces catarrh of the stomach and disturbs the general nutrition of the system. 3. The hypnotic and sedative action of paraldehyde is invariably preceded by a period of excitement, which sometimes may be very considerable (general exaltation, delirium, tossing about, &c.). 4. During (as well as immediately before and after) the sleep induced by paraldehyde, there is observed a decided decrease of reflex irritability; hence, the drug is indicated in all cases of hyperæsthesia and hyperalgesia of non-hysterical origin. [*See* Dr. S. A. Popoff's article, in the LONDON MEDICAL RECORD, 1884, April, p. 141.] 5. Paraldehyde is indicated, also, in cases where other sedative or hypnotic drugs are contra-indicated or cannot be used (for instance, on account of idiosyncrasy). 6. The action of paraldehyde is very similar to that of chloral, but the former remedy is better borne by the insane than the latter, and does not disturb the digestion as chloral does. 7. In order to prevent any necessity of increasing the dose, and to spare the gastro-intestinal tract, it is advisable to often make intermissions in the use of paraldehyde.

3405. *Finkelstein on Salicylate of Soda in Migraine.*—Dr. V. A. Devlezersky's success in the treatment of a severe case of migraine by salicylate of soda (*see* the LONDON MEDICAL RECORD, Dec. 1883, p. 525) induced Dr. L. O. Finkelstein to try the same plan in ten cases of his own. The results of two years' observations are summed up (*Vratch*, 1884, No. 29) by the author thus. 1. Salicylate of soda undoubtedly cuts short the course of migraine. 2. Its use is successful chiefly in the sympathicotonic form of the disease; in undefined varieties of migraine it acts less effectively; it seems to be inactive in the neuroparalytic variety. 3. The drug stops the paroxysms for a more or less considerable period. [Some of the author's patients remained free from attacks for a year. In a recent number of the *Centralbl. für die Gesammte Therapie*, Dr. Devlezersky stated that his patient had not had a single paroxysm during these two years, always taking, on very first signs of a threatening attack, two doses, half a drachm each, with an hour's interval.] 4. In hereditary cases, even in those of sympathicotonic variety, the drug acts less effectively than in the acquired forms. 5. Salicylate of soda cuts short the attacks in five or ten minutes after the second dose. 6. No other drug is equal in its action on megrim to salicylate of soda. 7. To obtain success, it is necessary to administer large doses of the drug (namely, not less than half-drachm doses, taken twice, with an interval of half an hour). However, when the patient is badly nourished or exhausted, it is better to give lesser doses (fifteen-grain ones), in order to prevent any untoward accessory influence of the drug. 8. When salicylate of soda is immediately eliminated by vomiting, it is advisable to give at once another dose, and thus to persist in cutting short the paroxysm.

3406. *Jarnovsky on the Treatment of Anthrax by Subcutaneous Injections of Carbolic Acid.*—In the *Vratch*, No. 35, 1884, p. 598, Dr. J. V. Jarnovsky, of Vasilsursk, basing his conclusions on 102 cases of anthrax in his practice, states that the best treatment of this disease consists in hypodermic injections of 2 per cent. solution of phenol. All the seventy-two cases treated by the author after this plan from 1876 to 1884 recovered, many of them being very serious (some of the patients, presenting a malign pustule on the face or neck, were first seen not earlier than on the sixth or seventh day of the disease). In mild cases, the author advises to inject four syringefuls of the solution into four spots around the tumour, at the distance about one inch from the slough, and to repeat the injections only in the case of re-elevations of the temperature. In severe cases, it is necessary to inject six or eight syringefuls at a time, to repeat the injections in six or twelve hours, and to go on with injecting once or twice daily (according to circumstances of the case) for about four successive days. The region of the tumour must be covered with a piece of lint soaked in 2 per cent. carbolic solution, over which an India-rubber bag, or Leiter's or Popoff's apparatus, with hot water, must be placed. The author never saw any instance of carbolic poisoning produced by the treatment above. [The first paper by Dr. Jarnovsky on the same subject appeared in the *Vratch*, Nos. 46 and 47, 1881. The treatment of carbuncle by subcutaneous injections of carbolic acid was recommended by Klingelhofer in the *Berlin Klin. Wochensch.*, No. 44, 1874; Estradère, *Gaz. des Hôp.*, 1875; Raimbert, of Chateaudun, in the *Jour. de Méd. et de Chir. Prat.*, 1876, art. 102,220; Moplain, Vadkovsky. As reference to Dr. R. Neale's *Medical Digest*, sect. 57 : 2, shows that hypodermic injection

of carbolic acid in anthrax was practised also by Hueter, Paterson, and Clover. See also Dr. Rubio's case in the LONDON MEDICAL RECORD, 1882, June, p. 233. In the *Meditz. Pribavl. k'Morsk. Sborn.*, Jan. 1883, p. 48, Dr. A. G. Zolotareff writes that he successfully treated two cases of anthrax by a combination of carbolic and grey mercurial ointments ; he thinks that his plan may be conveniently used instead of carbolic injections.—*Rep.*]

3407. *Bogush on the Treatment of Diarrhœa by Resorcin and Salicylic Acid dissolved in Castor-oil.*—In the *Meditz. Obozrenie*, 1884, No. 14, p. 164, Dr. O. J. Bogush, of Moscow, discusses the treatment of acute and chronic cases of offensive diarrhœa accompanied by a high fever, and sometimes delirium, on the one hand, and by the presence of enormous quantities of micro-organisms in fæces, on the other. [In some of the author's cases, the proportion of microbes reached 25 per cent. of the whole fæcal mass.] Dr. Bogush thinks that a severe aspect of similar cases may be dependent upon the self-poisoning of the system by ptomaines originated in the intestines. Hence, the rational treatment of the diarrhœa must consist in a rapid removal of the contents from the intestines, and simultaneously in destroying the microbes. As the author's experience proves, this end is most successfully obtained by the administration of a solution of resorcin in castor-oil. For the adult his formula is this : ℞ Resorcini puri ʒj. ; olei ricini fervidi, ʒv. Solve. To be taken at once. To children he administers eight grains of resorcin in a corresponding quantity of castor-oil. To disguise the odour and taste of the latter he advises to mix the solution with a tablespoonful of beer or stout. Of his numerous cases treated in this way, only one did not yield to resorcin, but rapidly recovered after the administration of twenty grains of salicylic acid dissolved in a tablespoonful of hot castor-oil. Equally successful resorcin proved in similar cases in Dr. Ikoff's practice. The author proposes to try the same plan of treatment in cholera. In conclusion, he adds that when observing an epidemic of cholera in Egorievsk in 1871, he obtained the best results from hypodermic injections of morphia and internal use of castor-oil with opium. In an editorial remark on the article above, Dr. V. F. Sprimon, from his independent observations, testifies to the value of castor-oil in cholera. In choleraic epidemics in Voroneje in 1866 and 1868, recovery followed in every case where castor-oil had been administered before the asphyctic stage of the disease. Quinine proved not only useless, but even harmful, especially in the asphyctic stage (where the drug accelerated the advent of paralysis of the heart). In the latter, the best results are given by free and often-repeated subcutaneous injections of brandy, tincture of musk, æthereal tincture of valerian, ether, spirit of camphor, and other stimulants.

3408. *Krasovsky on the Treatment of Malarial Cachexy.*—In the *Russkaia Meditzina*, No. 27, 1884, p. 566, Dr. A. S. Krasovsky, of Batum, writes that he treats malarial cachexy by the administration of iodide of iron (in the form of syrup, from 10 to 15 drops, two or three times a day) ; and that this not only improves the general state of the patients, but also reduces the hepatic and splenic swellings. Taken in the doses as above, the drug is well borne by the patients. Of other drugs, he found of use arsenic given either in Fowler's solution, or as Biett's solution (arseniate of ammonia), the former in five-drop doses, the latter in doses of 7 or 8 drops, two or three times daily. Biett's solution is preferable, since it disturbs the digestion in a far less degree than Fowler's solution. Quinine is used by the author in daily doses of 10 or 15 grains ; in some cases, cinchona bark gives better results than quinine. Tincture of eucalyptus is administered by him, in doses of 30 minims, only when there are marked gastric symptoms (anorexia, epigastric pain, &c.). Generally, Dr. Krasovsky does not think highly of eucalyptus as an antimalarial remedy. (*See* his article in the LONDON MEDICAL RECORD, August 1883, p. 323.)

3409. *Shkolnik on Burnt Alum in Intermittent Fever.*—Dr. D. Shkolnik, of Bendery, Bessarabia (a strongly malarial district), administered (*Russkaia Meditzina*, No. 29, 1884) burnt alum in eight-grain doses in 11 cases of intermittent fever. The paroxysms were cut short only in four cases, and of these in three a relapse soon followed ; thus, only one case was cured permanently. The author comes to the conclusion that burnt alum cannot possibly be substituted for quinine in the treatment of severe Bessarabian fevers. Tincture of eucalyptus gave equally unsatisfactory results. V. IDELSON, M.D.

REVIEWS.

ARTICLE 3410.

Memoir on the Nature of Diphtheria. By DRS. H. C. WOOD and H. F. FORMAD, of Philadelphia. Appendix A. Report of the National Board of Health for 1882.

THIS memoir contains the results of a number of interesting experiments and observations on the nature of diphtheria. The authors are of opinion that there is no anatomical distinction between diphtheria and croup, or between these and artificial croup produced by irritants, *e.g.* ammonia. They found micrococci in all the membranes, but these organisms did not differ except in their rapidity of growth from those to be found in the normal mouth. The micrococci were present in the blood of about half the cases ; of those in which no micrococci were found in the blood, only one died, and this was from laryngeal stenosis ; of ten cases in which organisms were found in the blood, six died. The constitutional symptoms appear to depend upon the entrance of the organisms into the blood, which is effected by passing into the lymph spaces below the inflamed spot. The micrococci were cultivated after Klein's method. Inoculation of rabbits with diphtheritic matter caused in no case diphtheria, but in some cases septicæmia, and in others tuberculosis. Inoculation within the trachea produced pseudo-membranous tracheitis, identical with that produced by ammonia. Unhealthy pus introduced into the trachea produced a similar lesion. Inoculation with portions of matter from cases of malignant diphtheria proved rapidly fatal, with numerous micrococci in the blood, and they regard this as true diphtheria ; the diphtheritic exudation was not constant, and only appeared at the seat of inoculation.

The authors regard it as proved that diphtheria is a disease common to men and animals, and intercommunicable. From experiments made by inoculating with filtered fluid, they conclude that the poison is solid and particulate, not soluble in water. The urine which contained micrococci acted as a very fatal poison. After cultivation, it was possible by

inoculation to produce with the third or fourth generation, marked constitutional symptoms with micrococci in the blood. Boiling the material before inoculation rendered it innocuous, but the boiling had to be done thoroughly (from 15 to 20 minutes).

At p. 116 the authors state, 'in all our experiments with diphtheria we have noticed that, unless local symptoms are developed at the seat of the injection, no systemic infection follows;' and they proceed to draw the conclusion that it is primarily a local disease. Without desiring to dispute the accuracy of this conclusion, the records of experiments 166, 137, 130, 129, 128, 92, 85, are not in accordance with the above statement. They record the case of a pig which died of diphtheritic gastritis, after eating the slops thrown out from the sick room of a case of diphtheria.

They are of opinion that the diphtheritic micrococcus is merely an active state of an organism which exists normally in healthy human mouths, but which under certain external conditions is stimulated to active growth. They differ as to the need for a local lesion to precede and prepare the way for the lodgment of the micrococcus, Dr. Formad thinking that an abraded surface is needed, while Dr. Wood points to the case of the pig just related, and to the experiments of Letzerich and Dammann, who produced diphtheritic inflammation by placing false membranes in the healthy nostrils of calves. They found micrococci present in the blood of measles, erysipelas, scarlatina, and puerperal fever, and they state that they cannot detect any physical or chemical differences between these and those found in diphtheria; and they also found that the pus from erysipelas caused lesions identical with diphtheria when inoculated in the same manner. They obtained a similar result with gangrenous matter. They therefore conclude that micrococcus septicus and micrococcus diphtheriticus are specifically identical; though they are not prepared to state positively that the micrococcus observed in the other diseases is really micrococcus septicus. They believe diphtheria to be a putrid or septic sore throat, with or without constitutional symptoms, according as the micro-organisms do or do not obtain entrance into the blood. They say there is no anatomical difference between a scarlatinal sore throat and that of true diphtheria; the micrococcus is as abundant in one as in the other.

ARTICLE 3411.

The Pathology of Suppurative Inflammation of the Kidney. By J. LINDSAY STEVEN, M.B. Glasgow: Alex. MacDougall. 1884.

THIS paper is a reprint from the *Glasgow Medical Journal* for September 1884, and constitutes the author's thesis for the degree of M.D. in the University of Glasgow. It contains a clear account of the subject, which has hitherto received scanty attention from pathologists. The author divides suppuration in the kidney into two classes, (1) the result of a poison in the blood, as in septicæmia and ulcerative endocarditis; and (2) secondary to inflammation in the urinary tract below the kidneys. His own contribution to the subject is the suggestion that in some cases this secondary infection of the kidney takes place through the lymphatics. He supports this by directing attention to the shape of the purulent deposits, which often are long striated lines radiating from the pyramids to the capsules, or small abscesses below the capsule; and he shows that injections of colouring matter, when forced into the lymphatics, assume the same shape and are distributed in the same regions. This thesis is another evidence of the vigour of the present medical school in Glasgow, which has now attained to a foremost rank among the British schools of medicine.

ROBERT SAUNDBY, M.D.

ARTICLE 3412.

Eczema and its Management: a Practical Treatise based on the Study of Three Thousand Cases of the Disease. Second edition. By L. DUNCAN BULKLEY, A.M., M.D. New York: Putnam's Sons. London: Churchill.

Dr. BULKLEY'S treatise on eczema, which now appears in its second edition, contains amongst a good deal that is theoretical many useful directions regarding the management of the disease; and the author's large experience lends value to the suggestions regarding treatment, which form a considerable part, and the best part, of the volume. Although the book contains little that is new, and can hardly be said to throw any light on any obscure points regarding the nature of eczema, we believe that it may be advantageously read by dermatologists who desire to keep themselves *au courant* with the practice of the art, as it is illustrated by the views of practical men in various countries.

Dr. Bulkley's views regarding the nature of eczema will be best understood from the following quotation. 'Eczema,' he remarks, 'is not a local disease, a dermatitis caused by external irritants alone; but is a definite diseased state, having important though varying connections with derangements of other organs besides the skin. It is to be also recognised, however, that eczema, like urticaria, may, in certain cases, be the result of a temporary disturbance of the system, and that the eruption may then disappear under proper local measures alone, the transitory internal cause having already passed away. But this is a matter to be appreciated and determined in each case in the management of eczema. The entire condition of the patient is to be taken into consideration; and all departures from health should be looked into and rectified as far as possible, inasmuch as any one of them may be an efficient element in prolonging the disease.'

As illustrating the influence of the nervous system in the production of eczema, Dr. Bulkley relates several remarkable cases, the relation of which will well repay quotation.

'Miss D., aged 53, was the executive officer of a charitable institution. Her Tuesday's work of each week was very severe and trying, on account of the weekly meeting of and inspection by the board of lady visitors; and that night was often sleepless. Her eczema of the face and hands was always greatly aggravated on the succeeding morning; often, indeed, the eczema, which would almost yield to treatment during the interval, would burst out afresh on the Wednesday succeeding the visit. This had been the case for months before I saw her, and was verified by myself time and again.

'Rev. Dr. B., a prominent clergyman, aged 52, had for many years an eczema of the head and face, which was always immensely aggravated on the Monday after the Sabbath's mental work and strain.

The same occurred whenever extra work, as public addresses, &c., was called for.

'Mrs. M., aged 32, a widow, who used the hand very greatly in writing for the press, and was also subject to very great nervous overstrain as editor of a department in a weekly journal, had an eruption of papular eczema over the right shoulder and following the nerve-tracts down the arm. Whenever rest was given to the arm, that is, abstinence from writing, the disease yielded readily; but the eruption would return in the same location whenever exhaustion was reached. She was a perfect type of a neurotic female, having had paralysis herself, and having insanity in the family. Electricity, in a form of central galvanisation, gave her great relief.

'In another case, that of a lady, aged 22, each nervous excitement, as hysterical crying or household disturbance, would be followed by a fresh outburst of eczema on the hands.'

We believe that it would be difficult to find in dermatological literature, outside that of the older French school, records of more remarkable cases.

G. THIN, M.D.

ARTICLE 3413.

Ventnor and the Undercliff in Chronic Pulmonary Diseases. By JAMES M. WILLIAMSON, M.D. Edin. Second Edition. 1884.

THIS is the second edition of a little work, which in 104 pages contains a great deal of information about Ventnor and its climatic effects. The material made use of consists of—(1) various climatological data collected from reliable sources; (2) cases under treatment at the National Hospital for Consumption when the author was resident medical officer, and cases from private practice. These amount in number to 693, and include phthisis, asthma, emphysema, bronchitis, chronic pleurisy, and empyema. No case of phthisis was accepted which had not spent at least ten weeks at Ventnor, assuredly a short limit of stay in a disease which requires months, and often years, of favourable climatic conditions, to act satisfactorily. This point is not lost sight of by the author, who regrets the limitation without being able to prevent it. However, of the 542 cases of phthisis, 401, or 73 per cent., reaped more or less benefit. Among these, amendment equivalent to restoration, is claimed for 50. Of the others, 141 became worse and 28 died. Dr. Williamson recommends the climate strongly for consumption of inflammatory origin, whether lobar pneumonia, or catarrhal pneumonia, a class of cases which appears to thrive in various climates, even in smoky London, and which may be said to have a strong tendency towards arrest. He as strongly condemns the climate for hæmorrhagic phthisis, and instances one patient whose condition exemplified this variety of consumption and who had seven attacks of hæmoptysis during eight weeks' residence at Ventnor. The author's observations on the occurrence of hæmoptysis at different months of the year are interesting and show that it is far more common in January, February, and March than at any other season, and that it is comparatively rare in the summer months. In fibroid phthisis the climate is contra-indicated if the cough be hard and irritable and the expectoration scanty and difficult to remove; but if the latter be easy, and the cough not violent, some relief is obtained at Ventnor. Mechanical phthisis, arising from the inhalation of dust of various kinds, is largely benefited, though this may be chiefly due to removal from the injurious atmospheres. In primary tubercular phthisis our author, like most advocates of special climates, recommends Ventnor for the favourable cases, though he does not furnish us with any comparative statistics of other sanitaria by which to judge the only method of coming to a right conclusion. Asthma, chronic bronchitis, and emphysema all derive benefit, but especially cases of empyema, which certainly make wonderful progress, owing probably to the strong marine influence, Dr. Williamson always maintaining, and we think rightly, that the climate is a stimulating and not a sedative one.

C. THEODORE WILLIAMS, M.D.

ARTICLE 3414.

Lehrbuch der Physiologie für Akademische Vorlesungen und zum Selbstudium. Begründet von R. WAGNER. Neu herausgegeben von Dr. A. GRUENHAGEN. Siebente Auflage. Hamburg und Leipsic: Leopold Voss. 1884.

THIS is the seventh edition of Rudolph Wagner's well-known text-book, which has so long occupied such a distinguished position in scientific literature. Edited for a time by Otto Funke, the book was next produced under the superintendence of the present editor, who has discharged his duties in that respect with great ability, fully maintaining its high character as an exponent of modern physiology.

Of the present edition only two of the eight to ten parts which will complete the work have as yet appeared; but the editor hopes that the completion of the whole will not require more than a year and a half, as a fresh part will be issued every six to eight weeks.

Both to the practical physician and to the advanced student this handbook of physiology will be a valuable one, for it is no mere colourless compilation of facts alone, but aims at presenting the reader with the life and spirit of physiological inquiry. In accordance with this principle, the references to the literature of the subject are very complete, and the results of modern work are clearly and yet at the same time succinctly set forth.

The first number is occupied chiefly with the physiology of the blood. The microscopic constituents of the blood, as well as the different methods for estimating the number of the corpuscles, and the proportion of hæmoglobin, are given in detail, and the chemistry of the blood receives ample justice in its treatment. In the section bearing upon the gases of the blood, the methods employed for their determination, and the results obtained by different authorities, are very ably given; and the whole question of the circulation is discussed by the editor in a most praiseworthy manner. Next follows the physiology of digestion, and the different secretions concerned are taken up in succession, the most recent contributions to this subject having evidently been utilised. The sections dealing with absorption, as it occurs in the stomach and intestines, are most interesting, as in them the different questions at issue are discussed with great judgment; and the same may be said for the succeeding chapter, in which the physiology of the chyle and lymph, and the functions of the spleen, thymus, thyroid, and suprarenal glands, are detailed.

The physiology of respiration is begun towards the end of the second part; but, even from the small

fragment of it given, we shall look with pleasure to the appearance of its continuation.

ARTICLE 3415.

Elements of Physiological Physics. By J. M'GREGOR ROBERTSON, M.A., M.B.; Muirhead Demonstrator of Physiology, University of Glasgow. London: Cassell & Co. 1884.

THE necessity for the introduction of physics into biological studies, and especially into physiology, is every day becoming more and more recognised. To study with any degree of accuracy the phenomena of life, whether in a physiological or in a pathological condition, recourse must be had to the exact methods of physical research, the adoption of which has materially contributed to physiological inquiries by impressing upon them that exactitude which is now the distinctive characteristic of all true science.

There can be no question as to the advances that have been made by means of the microscope, the polariscope, and the spectroscope. Precision in clinical diagnosis has been facilitated by their introduction into medicine. The adoption of new methods of exploration has also been of the greatest service in giving us accurate indications as to the circulation and the action of the heart, and as to the functions of the nerve-centres. In electricity, we have a therapeutic agent of wonderful power, as well as an effective means of investigation in the hands of the physiologist and the physician. Through investigations founded entirely on exact physical methods have we arrived at our present knowledge of the phenomena of osmose and diffusion as they occur in the body, and have determined the temperature of the organism both in health and disease.

What must henceforth, therefore, be regarded as a necessary complement to treatises on physiology, hygiene, and even pathology, is an exposition of an elementary character, of the fundamental principles of mechanics, heat, light, sound, and electricity. The book under review is an attempt to combine a general statement of the laws regulating these forces, as also of their elementary facts and principles, with their physiological applications. To a certain extent the author has succeeded. In his small treatise, one branch of physics after another has been taken up, the main elementary facts and principles of each have been detailed, and their chief physiological applications have been referred to, together with the description of such instruments as are usually employed. Electricity and magnetism and their applications in physiology and medicine are first considered, about a third of the book being thus occupied. This we regard as by far the most satisfactory part of Dr. Robertson's work, as it is well and clearly done, the descriptions being terse without being incomprehensible, and the subjects treated of being the most important so far at least as the medical student is concerned. Indeed, as the author states, the subject of electricity and magnetism lent itself most readily to the method he determined to adopt, and possibly for this reason it is the one that most commends itself to us.

The graphic method is very well described, as also the mechanics of the circulation. The section on optics is a full one, but, probably from too much condensation, it does not appear to us that it will find favour with students. Heat and sound are treated briefly, but we cannot say very satisfactorily. On the whole, however, considering the limits assigned to him, the author has done his work well; but we question the advisability of putting the book into the hands of a student who has not already studied the general principles of physics in such a small handbook, for example, as Balfour Stewart's *Lessons in Elementary Physics.*

T. CRANSTOUN CHARLES, M.D.

ARTICLE 3416.

A Handbook of the Diseases of the Eye and their Treatment. By H. R. SWANZY, M.A., M.B., F.R.C.S., Ophthalmic Surgeon to the Adelaide Hospital, Dublin, &c. London: Lewis. 1884.

THIS is a book perfectly adapted for students. It is written in clear and precise language, and is in every respect well got up. The author is intimately versed in the most recent literature of his subject, and introduces very numerous and accurate references to various authorities. His teaching may be safely trusted to, in that he accepts with caution the more recent operative procedures, which are introduced usually from abroad with much flourish of trumpets, practised at the expense of several unfortunate patients, and then for the most part forgotten till they are, after many years, rediscovered and again inordinately praised.

He gives capital rules for determining the nature of a cataract with reference to operative treatment. He does not, however, in our opinion, lay sufficient stress on the use of the plane mirror alone as a means of diagnosing opacities in the various media. We should certainly disagree with him, where he says that diabetic cataracts are favourable for extraction. Certainly they may, and generally must be, operated upon; but few would maintain, as the author appears to imply, that the prognosis is as good in these as in other cases.

The section on glaucoma is good, as is also that upon sympathetic disease. It is also of the greatest use to summarise the rules for enucleation in sympathetic affections. It is questionable, however, whether these, as interpreted by a timid practitioner, will not tend to continue unduly this hitherto too much practised operation.

In treating of neuro-paralytic keratitis, he uncompromisingly pronounces it to be due to the exposure of the cornea to irritants. However, under the head of exophthalmic goître, he says 'the exposure of the eye and dryness of the cornea are probably to a great extent the causes of ulceration in this disease, when it occurs;' following which he refers to Sattler, who attributes it largely to paralysis of the nervous supply of the cornea. On the same page, he says that the condition of the pupil is unaffected in exophthalmic goître. Surely it is not unfrequent to find the pupil unduly small in this malady. Indeed, on the next page but one he somewhat recedes from his statement in speaking of the absence, as a rule, of a pupillary symptom.

The section devoted to the action of the ocular muscles is admirable, as also are his remarks on the treatment of strabismus in general. The statement as to the attachment of the internal rectus tendon to the sclerotic by means of connective tissue between that tunic and its under surface is clearly misleading, though so slight an inaccuracy scarcely merits mention in comparison with the abundant and accurate information on this difficult subject.

Under the head of retinitis albuminurica, he gives a very plausible explanation of the bright dots or

radiating striæ which are circled round the macula, supposing them to be the fattily degenerated inner extremities of the fibres of Müller.

It may be here remarked of the book in general, that it is no mere compilation, but that it expresses the author's independent judgment on the numerous and varied opinions and practices of to-day.

Here our task must end. It has been a pleasant and instructive one. We cordially recommend to each of our readers who is interested in this subject the purchase and careful perusal of this admirable text-book. W. A. Brailey, M.D.

Article 3417.

Surgical Handicraft. A Manual of Surgical Dressing and Minor Surgery, for the Use of Students and House-Surgeons. By Walter Pye, F.R.C.S., Surgeon to St. Mary's Hospital and the Victoria Hospital for Sick Children, &c. 8vo., 560 pp., with 208 illustrations. London: Henry Kimpton. 1884.

The object of this work is something more than to be a text-book of minor surgery and bandaging. It is evidently intended to include much that may be required of dressers and house-surgeons; and an idea of the scope of the work may be obtained from some account of the sections into which it is divided. The arrest of hæmorrhage forms the subject of the first section, and is clearly given, but we notice a woodcut (fig. 1) showing the position of the hands compressing an artery which would be misleading to a student, as it makes the pressure to be given by the side of the upper thumb. The text here and elsewhere fails to give directions for some of the simpler forms of surgical handicraft, and in places refers the student to his surgeon or house-surgeon for practical instruction which might be looked for here.

The section on bandages and splints gives a good account of these appliances, and especially of some of the simpler forms which everyone ought to know how to use. The triangular bandage is especially well described and applied; but we do not think that the direction for making the turns of a roller bandage is well illustrated by the figure, nor do we think the student has sufficiently impressed upon him by the author the value of the words parallel and equidistant. This section includes some useful advice about trusses, but we should have been glad if the author had discarded the old and, as it seems to us, unreasonable practice of 'fixing a *small* pad' over the navel in cases of umbilical hernia in children. Surely this tends to increase rather than diminish the opening. The author's description of strapping a wound to bring the edges together would apply more reasonably for the treatment of such cases.

The section on fractures includes an useful chapter on the immediate treatment of fractures and on improvised splints, which will be read with interest by students as well as by ambulance-workers. And then the commoner forms of fracture are separately considered. These are well treated, and the only omission of importance that we notice here is that of after-treatment for stiffened joints. Each surgeon has no doubt his favourite way of treating special fractures, but the author avoids complicated apparatus, and gives sound advice as to the general principles of treatment.

Wounds, ulcers, and burns form another section, and the directions are clear. We are glad to find that the number of different forms of ulcers is kept within a practical limit, and the treatment is adapted to the capacity of student as well as patient. But the author gives very little help to an unfortunate bruise, even if it be a disfiguring black eye.

The next section on cases requiring prolonged or (? and) mechanical treatment is one of the best in the book, and is especially valuable for its treatment of tedious joint-diseases and spinal cases.

The section on certain emergencies, surgical and general, is also very good, and the house-surgeon and practitioner will appreciate the advice given in a foot-note at its commencement. In his account of the practical treatment for such cases as are included in this and the preceding section, the author fears that he may have trenched on the domain of theoretical surgery; but we think that no more has been given than is essential to the proper understanding of the principles which should guide the treatment of such cases. Treatment, to be rational and not empirical, must be founded on principle, and principle in treatment is dependent on pathological knowledge and clinical experience. We are glad to see, therefore, a rather full account of what may be the causes of certain conditions, and these causes carefully considered and impressed on the reader before the relief of the emergency is indicated. We should not be sorry to see this chapter considerably extended and made into a separate volume, which would be of great practical value. We think that in this chapter the author might have given some account of Dr. Howard's method of direct resuscitation from drowning, and not merely referred to a particular volume of one of the journals, which might be difficult to see when it was wanted.

Mr. Joseph Mills contributes a chapter on the administration of anæsthetics, and Mr. H. H. Hayward one on the extraction of teeth; while Mr. Field follows with a short but useful contribution on some points in the practical management of aural cases. This latter is useful as far as it goes; but we confess to surprise in not finding here or elsewhere any directions on the use of the ear-speculum. Surely this is an oversight in a work on surgical handicraft, and we should have expected some account of how to employ this instrument. The same remark must apply to the absence of any directions as to the use of the ophthalmoscope. These are as much part of surgical handicraft as the use of catheters in the examination of patients.

The section on the minor operations of surgery comprises eighty pages of sound practical advice in the performance of the commoner operations of surgery. It includes an excellent account of the operation and after-treatment of tracheotomy, the opening of abscesses, the use of catheters, the removal of small cysts, polypi, and piles, the operations for phimosis, venesection, and cupping, with a few minor matters. The author does not attempt to describe amputations in general, but occupies a small space in giving general directions about minor amputations.

The appendices contain some good formulæ, and a well detailed account of a case of fractured patella, which was very satisfactory in its results, the patient gaining the high jump and being a good third in the 100 yards race a year and a half after the accident, and only nine months after giving up the use of the simple back splint. We should have been glad, however, if the case had been more completely recorded

as an example for students. It does not appear whether it was the right or left limb that was injured—a point of some importance in view of recent discussions on the use of the limbs and right or left leggedness. But we recognise that the narration is not meant for an example of note-taking, but only a supplement to the advice about treatment. Would not a chapter on note-taking and another on 'how to observe' be justifiable in such a book? Would it not be included in the 'other matters connected with the work of dressers?' and might not an appendix also contain with advantage some instruction about making *post mortem* examinations?

An attractive feature in the book is the clearness of the marginal notes, which make reference easy. The printing is good, and the large number of woodcuts afford great help to the reader. The author is to be congratulated upon a very practical and useful handbook. W. W. WAGSTAFFE.

NEW INVENTIONS.

ARTICLE 3418.

MEDICAL AND PHARMACEUTICAL EXHIBITION AT HUMPHREYS' HALL, KNIGHTSBRIDGE.

MESSRS. BURROUGHS, WELLCOME, & CO., Holborn Viaduct, show samples of the various drugs and dietetic preparations associated with their names. The new product, Hazeline, is one of the prominent features in the display, and its advantages are becoming generally admitted by the profession. The Kepler Extract of Malt has been brought prominently before the medical profession in this country, so that further details are unnecessary, and it only needs to be noted that improvements have recently been made in it by which a much larger amount of starch is digested. The Kepler Emulsion of Cod-Liver Oil, combined with the Extract of Malt, is one of those preparations that has proved a boon to a large number of persons unable to digest the oil in its natural form, and converts an otherwise nauseous medicine into a comparatively agreeable one. The ovoid capsuled pills, known also as 'McK & R,' are among the articles shown; and the now noted Wyeth Tablets need no further recommendation, their advantages having been set forth on previous occasions. Wyeth's dialysed iron is another of the American preparations shown at this Exhibition by the firm, and as a tonic has made rapid progress in professional favour, considering its recent introduction in comparison with other preparations of iron. It is nearly tasteless, with a faint saline flavour, does not blacken the teeth or gums, and may be taken by most persons without producing constitutional disturbance. The beef and iron wine introduced by Burroughs, Wellcome, & Co., has received high commendation, though looked upon as somewhat of an innovation when first introduced. It contains beef-juice and citrate of iron in solution in wine, and ranks as a quickly acting and powerful tonic. There are several other interesting features in this exhibit.

Extracts of Beef form a prominent feature in the Exhibition. Mr. Edward Weber, of the Wool Exchange, also exhibits 'Cibil's' Fluid Extract of Beef. Great advantages are claimed for this extract, and it is said to be in use in the leading hospitals on the Continent and in America. The reporter has not, however, had an opportunity of testing it Kemmerich's Extract of Beef is also shown.

Messrs. W. J. Bush & Co., Manufacturing Chemists, Distillers of Essential Oils, &c., Artillery Lane, Bishopsgate, E.C., are present with a good assortment of their specialities, from which the following are selected for especial remark.

No. 1, English Drawn Essential Oils.—Exceptional care is exercised in producing these oils, being specially adapted for use in medicine: Ol. Caryoph. Ang., Ol. Carui Ang., Ol. Amygd. Essent. Ang., Ol. Amygd. Essent. Ang. *sine Acido Prussico*, Ol. Anethi Ang., Ol. Cubebæ Ang., Ol. Copaibæ Ang., &c.

No. 2.—Ol. Santal. Flav. Ang., drawn from specially selected wood, is strongly recommended for capsules.

No. 3.—Soluble essences for aerated beverages (invented by W. J. Bush & Co.).—These essences impart to ginger-beer, lemonade, &c., a most delicious flavour and aroma. This firm has been awarded eleven gold medals at various international exhibitions for the exceptional quality of their manufactures, and is one of the oldest and most to be relied on in this particular industry.

Messrs. Heron, Squire, and Francis, the old established wholesale and manufacturing chemists of Coleman Street, whose analytical laboratory is presided over by Mr. W. A. H. Naylor, F.C.S., &c., have a commendable display of drugs and chemicals, including the most recent additions to the Materia Medica. Of Galenicals, great stress is laid upon the liquid extracts and concentrated liquors, which are well worth attention. Soluble essences form another section of the exhibit, and have long been noted for their excellence, also dietetic articles including infants' food, the popular malt extract, &c. The firm have also paid much attention to sanitary requisites for many years past, and from these the following are selected as worthy of attention by the profession and those interested in sanitary work.

Solutio Picis Carbonis. (Heron).—This is a solution in alcohol of the *whole* of the medicinally active substances contained in coal-tar, and combines antiseptic, detergent, and parasiticidal properties. For the correcting of disagreeable odours, for the cleansing of the bed linen of fever patients, for revitalising vitiated atmospheres, and for destroying poisonous effluvia, it has been recognised by the profession for upwards of twenty years as a most effective agent. It continues to be largely used with the greatest advantage both in hospital and private practice.

Coal-Tar Soap (Strong Medicinal).—This contains 25 per cent. each of the alcoholic solution of coal-tar and pure glycerine, combined with a fatty basis. It is particularly suited for the sick chamber, wards of hospitals, and the dissecting-room.

Coal-Tar Toilet Soap.—It is innocuous, non-irritant, agreeably perfumed, and furnishes a convenient and pleasant method of obtaining the sanitary effects of coal-tar on the skin.

Coal-Tar Tooth Soap.—It is prepared with the alcoholic solution of coal-tar in combination with camphor and other antiseptics, and is serviceable for allaying inflammation of the gums, removing tartar from the teeth, and sweetening the breath.

Jeyes' Sanitary Compounds Company (Limited), 43 Cannon Street, E.C., exhibit their several preparations included in the Disinfectant Class. The 'Perfect Purifier' has long been known as a cheap,

reliable, non-poisonous, and non-corrosive disinfectant. It is one of the authorised preparations certified by the Board of Trade and the Indian Government, and has received a large number of medals and certificates for its excellence. It is much used in connection with dressings, and so forth. The various forms of soaps—both for toilet and general household purposes, including soft soaps—are commendable, and an excellent preparation for washing dogs may be recommended.

Messrs. Thompson, Millard, & Co. (Limited), of the Curtain Road, E.C., exhibit a variety of useful and notable articles, coming under the head of druggists' sundries. Of these the feeding bottles—the 'Mater,' the 'Imperial,' and the 'Bristol,' each possess some especial feature either as regards price or construction. The 'Mater' is undoubtedly the best, having a bent neck, with wood-top corks, screw glass-stoppers, tin screw-caps, or earthenware and porcelain, and rubber of the best quality. The Enemas are no less worthy of note, whether estimated by their ingenuity, good make, or economical price. There are also some excellent Breast Exhaustors of novel construction. Respirators, Chest Protectors, Smelling-salts, Lint, Cotton-wool are to be seen at this Stand; and the display of Surgical Instruments is of high quality, and have been taken from stock and not specially made for this Exhibition. The firm are sole proprietors of William Schweitzer's specialities of Dandelion Coffee, Dandelion Cocoa, &c.: preparations that have been before the public for some years, and have received reliable medical testimony as to their worth.

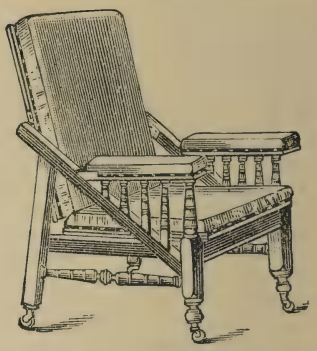
The Khoosh Tonic Bitters Company (Limited), 447 Strand, have a stand filled with this Indian vegetable preparation, which appears to be attaining considerable popularity. It is probably a more wholesome compound than many of the 'bitters' that are daily used by many thousands of persons, as well as more palatable.

Lime and Lemon Juice preparations are shown by Alexander Riddle & Co., 38 Commercial Street, E., who are the proprietors of the recipes of Mr. Stower, the first person who introduced lime juice syrup as a commercial product. The preparations consist of lime juice cordial and syrup, and lemon juice cordial and syrup. The difference between the lime juice cordial and syrup appears to be in their respective strengths, the syrup being the strongest. The sample tasted was taken from ordinary stock, and contains nothing but the pure juice of the fruit. It is free from the musty flavour of many similar preparations now on sale, has a pleasant piquant flavour, and mixes well with Apollinaris, Seltzer, and other table waters. The lemon juice syrup is well adapted to take the place of the fresh fruit in the compounding of the drink known as lemon squash, one wineglass-full being equal to the juice of a lemon. Stower's preparations of the lime and lemon may be safely recommended as being good and trustworthy.

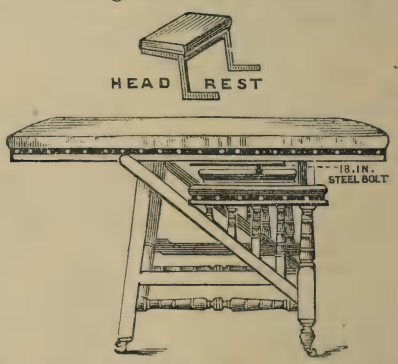
The 'Desideratum' Mixing Machine is shown by the inventors and manufacturers, Messrs. P. H. Bracher & Co., High Street, Wincanton, Somerset. It is very simple in construction, not likely to get out of order, and effects its purpose in the best possible manner, with a great saving of time and labour over the pestle and mortar, all grit or foreign matter being entirely eliminated. The mixing machines are made in a variety of sizes, from a small one to suit the counter of the retail chemist, to others adapted for manufacturing purposes on a large scale. While specially fitted to the use of the chemist and druggist, the 'Desideratum' Mixer will be found equally efficacious for almost any trade where mixing or crushing different ingredients have to be carried on, the thorough incorporation of different substances being perfect.

Messrs. Billington Bros., of Hope Street, Liverpool, exhibit their patent spring mattresses, adapted for hospital and general use; these have been described in detail on former occasions, and as recently as Oct. 15 in the SANITARY RECORD, in connection with the Exhibition of the Sanitary Institute at Dublin. Messrs. Chorlton & Dugdale, of Manchester, show a collection of the Excelsior spring mattresses.

The New Convertible Gynæcological Chair, the invention of and shown by Mr. J. D. Kennard, Grand Parade, St. Leonards-on-Sea, is one of the simplest and cheapest appliances for the purpose of examinations which can be imagined. In this easy chair the practitioner has chair and couch combined, as depicted in the illustration, at the cost of eight



guineas only. In its normal position it is a very comfortable easy chair, but by depressing the head both that and the seat are brought up to a level with the arm-rests, as in the second illustration, an eighteen-inch long steel bolt on either side securing



it, the position being further strengthened by two perpendicular stays, that fall into positions assigned for them, and that are also bolted. A small head-rest, as shown, can be added to it if required. Nothing would appear to be better adapted for its purpose than this chair, which is covered with American cloth, considered the best material, as being waterproof; although it can be upholstered in a more luxurious manner if preferred. It is no heavier than an ordinary easy chair, and can consequently be moved as easily, and in making an

examination a hassock, placed at its side, enables a patient to at once recline upon it. The utility and small cost of this invention render it a highly desirable acquisition for the consulting-room of the obstetrician.

Messrs. Pache & Son, 22 Great Charles Street, Birmingham, who are well known as makers of artificial human eyes, have a case containing an excellent assortment of these appliances. They are very natural in appearance, and when in use are difficult to distinguish from the natural organ. Messrs. Pache & Son manufacture artificial eyes to pattern or drawing, and their many years' practical experience and work amongst the principal hospitals in the kingdom is a guarantee for the excellence of their productions.

The Revolving Ball Filter, shown by a company bearing that name, of 67 St. James's Street, S.W., is a filter of the 'ball' form made in various sizes, from a small one to affix to a counter tap in a restaurant or private dwelling, to a large size suitable for large service pipes, by which a constant and rapid supply of filtered water can be ensured. Animal charcoal, or other filtering media are used; the passage of the water through which, being assured by a washer forming a tight joint round the ball and packed by the pressure of water, it is claimed that all organic matter held in suspension is arrested by this means and held within the filter. The mode of cleaning is simple, and instantaneously effected by reversing the ball without removal from the tap, the first passage of water passed through after this operation being of course discarded for use. New filtering material can be introduced at any time without trouble. There is also another passage for water that may not require filtration.

Mr. Maignen, of 22 and 23 Great Tower Street, is present with a collection of his celebrated 'Filtre Rapide,' which needs no detailed description on the present occasion. No water filter that has been introduced of late years has obtained public favour so rapidly as the 'Filtre Rapide,' and the fact that this form of filter has been adopted by the War Office (Mr. Maignen having also introduced special shapes to suit armies in the field or on the march) is a strong testimony in its favour. Mr. Maignen was also appointed filter contractor to the Fisheries and the International Health Exhibitions, and the jurors at each of these exhibitions awarded him a gold medal. He has also turned his attention with success to the softening of water both by independent patented means, and with his patented medium 'carbo calcis' used in connection with his filters. The system adopted for softening water has likewise received official recognition.

The Silicated Carbon Filter Co., of Battersea, are also present with a collection of filters constructed with their patent carbon block.

Maughan's Patent Geyser Company (Limited), of Cambridge Heath and Cheapside, exhibit their popular heater for producing hot water for baths or other purposes by merely passing it through their heater. This appliance has been before the public for some years, and needs no detailed description.

Indian teas are shown by the Kangra Valley Indian Tea Growers' Association, 11 Panton Street, Haymarket, and also some excellent curry powder. Curries prepared for the company by an Indian cook, formed one of the *entrées* at a luncheon given by Mr. Humphreys on the opening day of the Exhibition, and met with universal approval.

A well-executed model of a nineteen-roomed house of the bungalow character made (with the exception of the wood framing) entirely of slate-stone, and the exclusive work of the exhibitor, possesses interesting features of a sanitary character. It is shown by Mr. Kortright Brock, a retired medical officer, now owner of the Boscastle slate-quarries, Cornwall. Having spent many years on the staff of the army, it is not surprising that the bungalow form of dwelling finds favour with Mr. Brock. The model is constructed on a scale of half inch to the foot, and may be technically described as follows:

Rows of dwarf pillars standing on separate stones, support a gridiron of creosoted balk or light girders, on which is laid a platform of slabs of slate or other material selected. Shallow grooves in this receive the bottoms of the walls formed also of slabs, placed on their edges and strengthened by an inside and outside skirting, screwed together and into the floor; similar mouldings above receive the tops of the walls, form the cornices of the rooms, and act as horizontal tie-rods; others, placed vertically, divide the walls into panels and bind them down to the foundation. The ceilings are made of wood, or thin slabs, the joists supporting them forming panels in keeping with the walls. These are of single thickness slabs, for temperate climates; or double, with an interspace between them: the air in which, when confined, is the best non-conductor of heat for cold countries, or can be turned into a constant cooling current for warm latitudes. Iron was substituted for wood throughout when advisable. Joints are made firm by fishplates and battens, fastened by bolts and nuts, and air-tight, by screwing home on a layer of slag wool, or other packing. There are no closets inside the walls proper of the building, neither are there drains of any sort. All drainage is received into a tank on wheels, which is removed as necessary; an empty disinfected one being substituted: three at least go with each house.

Mr. Brock calls this a portable house, and shows that every portion of it can be taken down and removed to any other locality, every separate slab being numbered; and, furthermore, that any house may be constructed on this principle at much less than the cost of brick. Thus, a dwelling that would cost 2,000*l.*, if built of brick, can be erected for about 1,500*l.*, and a great saving is effected in first cost. The principal advantages claimed for the slate house are that it is absolutely proof against fire, for there is nothing to burn save the flooring boards; that damp cannot affect it, as it does not rest on the ground, and slates absorb moisture to an infinitesimal degree only; that it is almost proof against vermin and insects, as, to use the inventor's words, 'there is not a spot where a mouse can burrow, or a crevice where a cricket could hide;' the freedom from danger of fever, owing to the free passage of air and light under the house; the total absence of drains securing also immunity from sewer gases, the closets, as before stated, being outside the main walls. Erected on leasehold land, it remains the property of the tenant, and not of the landlord, and can be removed at pleasure, and it is well known that slate does not deteriorate to any appreciable extent, as brick or stone, while the surface can be made to resume its pristine appearance by sand rubbing. It is almost needless to add that the building may be erected in as plain or as ornate form as the fancy of the owner may suggest, and the interior embellishment of the slate

walls may be carried out in like manner. That slate-stone possesses certain advantages over brick, as already suggested, apart from cost, there can be no doubt, and if Mr. Brock can introduce its use here or elsewhere at such a reduction in price, as the writer is led to believe, he will confer an advantage on the community at large; but when he talks of taking down his house and removing it to another locality, the question arises as to who are they who are disposed to lead the nomadic life he suggests, and where in the circumscribed area of this island would they from time to time 'pitch their tents.'

Mr. K. R. Schramm, surgical mechanician, 64 Belmont Street, N.W., shows in a small case no less than twenty-four specimens of his work, amongst which will be found, in addition to some novelties, articles invented by Mr. Schramm on former occasions, all of them exhibiting good workmanship and finish. One of these is an elongated crutch (Fig. 1) made on the telescopic form, which enables it to be lengthened at both or either ends. The only crutch with which the reporter is acquainted that attempts such a procedure is lengthened at one end only and it must be clear that this would cause the hand-holds to be at times in a disproportionate position, but if an elongation takes place in a proportional manner at top and bottom according to the height of the individual, the hand-rests can be brought to their proper level. Fig. 2 represents a spinal support for dislocated hip-joints, which, by means of a sliding pad, enables the dislocated joint to be controlled to a certain extent. The inventor states that he has tried it on several patients, particularly on a child only four years of age, with the most satisfactory results. Fig. 3 is an appliance for a wry back, in which, by means of a ball and socket joint, the head can be controlled in every direction. This instrument, it is stated, has given great satisfaction. Fig. 4 represents a light and neat instrument for use in debility of spine and contracted chest.

Fig. 5 represents a leg-iron, intended to overcome loss of power in the hip-joint, combined with contraction of the knee. The inventor calls it a sitting instrument, as the upper part forms a seat, and it also enables the wearer to walk comfortably, and without the aid of a crutch. Dr. Protheroe Smith's band for displacement is also shown, and

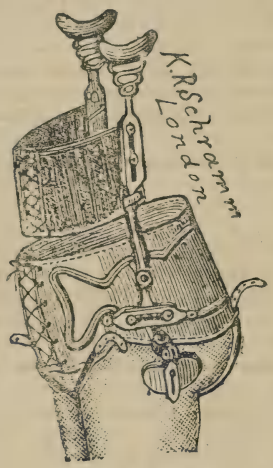


Fig. 2.

Fig. 1.

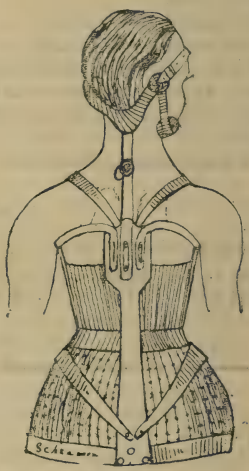


Fig. 3.

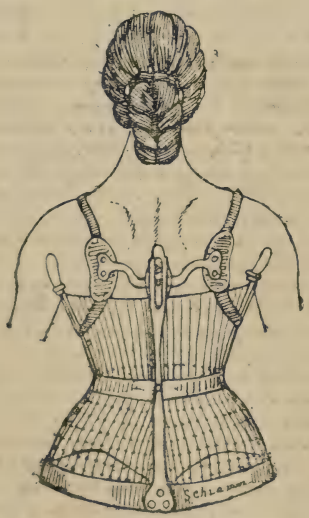


Fig. 4.

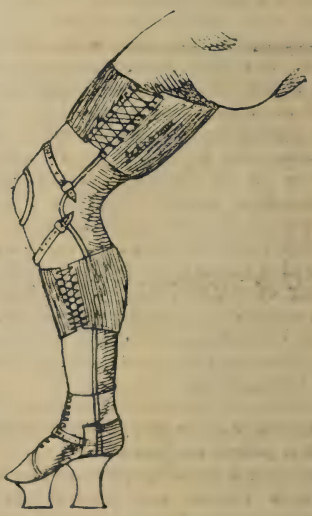
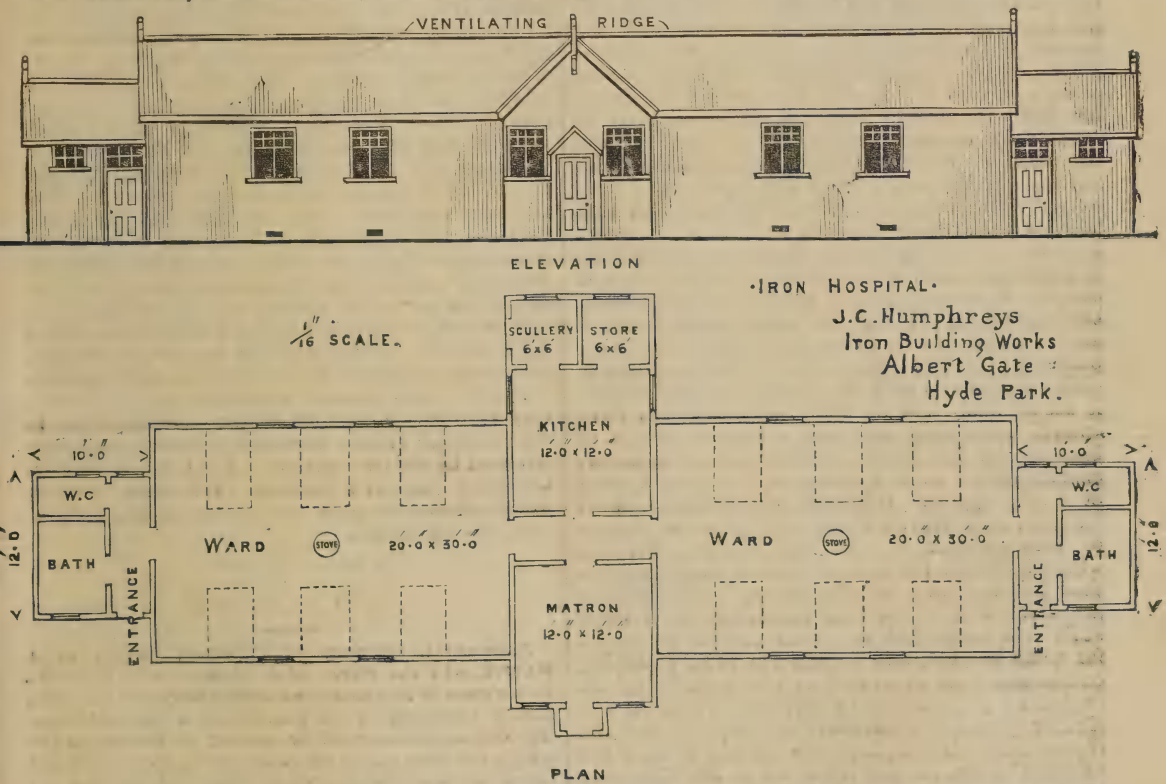


Fig. 5.

the same gentleman's appliance for pendulous abdomen, made with improved disconnecting parts. These appliances are generally well known to the profession. An improved abdominal belt, of Mr. Schramm's invention, is also commendable. It is mainly made of strips of webbing to prevent 'riding' up, and is much lighter than other inventions for the same purpose. Mr. Schramm's case also contains several other useful and ingenious inventions for the relief of suffering.

The greatest amount of interest in this Exhibition has, however, centred in the portable hospital erected by Mr. Humphreys on a portion of the space occupied by the annexe at the National Health Society's Exhibition held here last year, and furnished by the authorities of University College Hospital with all the most modern appliances used in sick and surgical wards. The hospital has been erected to illustrate, first, the adaptability of corrugated iron structures to such purposes; and, secondly, the ease and rapidity with which they can be erected, taken down, and transported to other places. Although the material, corrugated iron, is used, it must not be supposed that the cold cheerless aspect of the metal is visible anywhere but on the outside, as the interior throughout is first lined with felt, and then covered with stout match-boarding stained and varnished; warmth, comfort, and a cheerful appearance being thus secured. The flooring is usually of planed boards, one inch thick, or it can be laid on the block system if preferred. Ventilation is also thoroughly provided for, and the isolation of closets and baths will be seen on reference to the accompanying engraving.

The hospital in question, it will be seen, is large enough for twelve beds, and the entire building can be set up and finished in the manner described at a cost of £300. The larger the building the less in proportion is the cost. It is no slight advantage that a substantial and comfortable building can be erected at so low a cost within a few days of the outbreak of an epidemic in any locality, and Mr. Humphreys is so well prepared for emergencies that he is ready to guarantee that such a building as the one described shall be erected within a week in any part of the kingdom. It is stated that this hospital as it stands can be purchased after the close of the Exhibition at much less than cost price.



Article 3419.

THE COOPER COAL-LIMING PROCESS AS APPLIED TO THE MANUFACTURE OF GAS.

The subject of the purification of gas is of such paramount importance as regards the health of a large portion of the community, that it is important an desirable to bring the advantages of this system under the notice of the medical profession. Within the last year or so, various letters have appeared in medical journals and the lay press on the deleterious effects on health arising from the noxious fumes of the sulphuretted hydrogen discharged into the atmosphere by the emptying of the purifiers at the different gas works. In London and its neighbourhood, this is a yearly increasing nuisance owing to the gradual rise in the consumption of gas, and the extension of 'plant' now and again taking place. The purification of gas, as many of our readers are aware, consists in passing it in its last stage of preparation through vessels charged with oxide of iron and lime, and the injurious and disgusting

odours that constantly occur in the neighbourhood of gasworks, and that are wafted by the wind to a considerable distance, are due to the necessity of emptying these vessels at periodic and short intervals. It is clear then that if a process can be adopted that will prevent this necessity, the nuisance in question will be stamped out and the public health be correspondingly benefited. This desirable consummation now appears to be within reach by the invention of the Cooper Coal-liming process, which consists simply in mixing a small proportion of slacked lime (about 2½ per cent.) with the coal before it is placed in the retorts, and eliminating it from the purifiers, which are charged only with oxide of iron ; in other words, the introduction of the lime in the first process instead of the last. In all other respects the manufacture is the same ; nothing has to be added to or taken from the plant, nor the smallest expense to be incurred in the process. Rather the reverse is the case, as a large amount of labour is saved in the constant emptying and recharging of the purifiers. Impressed with the importance of the question, the editor of this journal a short time since commissioned a competent person to proceed to Tunbridge Wells (where at the gasworks in that town the coal-liming process has been in exclusive use for nearly a year) to inquire into all the details; and the result of the investigations made by this gentleman, coupled with various experiments carried out by experts connected with the gas industry, convinced him that there is considerable merit in the invention, which he believes only requires a certain amount of time to become general. For some time past the journals devoted to the gas industry have been teeming with correspondence *pro* and *con* on the 'new departure,' and it is interesting to read an account of the experiments that have been made by gas managers in different localities with Mr. Cooper's process, though it seems likely that most of these gentlemen have entered upon their task with a certain amount of bias against it. In one instance a gas manager, experimenting in two works in his town, arrived at totally opposite results—a circumstance which naturally suggests that there must be radical defects or incompetence in the manipulation. On the whole, however, the results of these experiments—though in the main carried out on a small scale—are favourable. The one exception on a large scale was conducted at a metropolitan gas-works for some months, and though the most gratifying encomiums were expressed to the patentee by the engineer ; yet, strange to say, the working by the Cooper system was suddenly discontinued, and the directors of this company have refused to give the 'Cooper' Company any report as to why they gave up their process. More reliable testimony to fall back upon is met with in the case of the Tunbridge Wells works, where any one interested in the system can go and see the process for themselves. It has been exclusively adopted by this company for about one year, and the whole of the gas manufactured by them during that time has been by the Cooper process. Their works are constructed on the most modern principles, and well adapted to test a new invention ; and great credit is due to their manager (Mr. Dougall), who, having the courage to maintain his opinions, has triumphantly proved them to be correct. One purifier has practically effected the entire purification of all the gas made for eleven months without having been opened once until recently, when it ceased to act, and had to be emptied. As this effect is unprecedented in the annals of gas-making, a party of experts were invited to witness the operation, and a large number of gas managers attended, to whom samples of the spent oxide of iron, which has been named a 'sulphuret of iron sponge,' were presented for analysis. Gas by this process is practically made in closed vessels, the deleterious compounds being largely eliminated from it ere it reaches the purifiers, which require to be charged only with oxide of iron, as before mentioned. This again takes up a further proportion, and the secret of the purifiers fulfilling their purpose so long is that they are constantly revivified by the admission of about one per cent. of fresh air, and the contents, which appear to increase sensibly in bulk, are practically without smell on exposure to the atmosphere. Powerful testimony in favour of the Cooper process is found in the crucial experiments made by Professor Wanklyn and Mr. R. P. Spice, C.E., the Consulting Engineer to the Tunbridge Wells Gas Company, the former gentleman having delivered several lectures on the subject, and the latter has published a pamphlet upon it. So far this question has only been considered from an hygienic point of view, but there is also a commercial side to the question. Holders of gas stock need not fear that their property will be lessened in value by this process becoming general. On the contrary, the advantage is all on their side. The cost of purification is considerably less, more products in the shape of coal-tar and ammoniacal liquor are realised, and coke of a superior quality is produced. Thus from all points the advantages appear to be in its favour, and it is difficult to understand how prejudice (which to some extent has been the case) should bar the way to its success. A hygienic argument in favour of Cooper's process is that the old system of emptying gas purifiers is very injurious to the sight of the men employed in the process, a serious objection which is completely obviated by the new method. The Coal Distillation Company (Cooper's process), 18 Finsbury Circus, will be pleased to give any further information relating to the subject.

MISCELLANY.

Abdominal Section in Central Africa by a Native.—In the *Edin. Med. Jour.*, April 1884, Mr. Felkin gives an interesting account of a successful Cæsarean section performed in his presence by a native African. The operator commenced by making an incision in the middle line from a little above the pubes, and ending just below the umbilicus ; the whole abdominal wall and part of the uterine wall being severed by this incision. The bleeding points were touched with a red-hot iron. The incision into the uterus being enlarged, an assistant held aside the abdominal walls, whilst the operator removed the child. Next the cervix uteri was dilated from the inside, and the placenta, clots, &c., were cleared out of the uterus through the abdominal wound. The operator all this time was keeping up pressure on the uterus, until it firmly contracted. The wound was covered by a porous mat, and the edges of the incision were brought together by means of seven iron spikes, well polished, like acupressure needles, and fastened by string, made from bark cloth. A paste, prepared by chewing two different roots, and spitting the pulp into a bowl, was thickly plastered over the wound. Eleven days after the operation the wound was quite healed, and the woman seemed well.

The London
Medical Record.

Article 3420.

KOCH ON THE COMMA-BACILLUS.

Dr. Koch has lately published a critique of the latest opinions on the comma-bacillus, in the *Deutsche Med. Wochensch.*, No. 45. In the first place, Koch especially insists, as on previous occasions, that our opinion about any particular kinds of bacteria must not rest upon one-sided observation of certain morphological characters only, but must be formed from the consideration of their whole properties, biological as well as morphological. A particular species of bacteria is only characterised as such by the sum-total of its properties, and it can be diagnosed only with reference to its whole behaviour. Our investigations should be undertaken with the full consciousness of the indispensable necessity of this postulate, and under the absolute guidance of the methods employed, if we venture on the difficult question of the relationship of the comma-bacilli. Unfortunately this cannot be said of investigators so far. It may be remembered, from the reports of the Natural Science meeting at Magdeburg, that Dr. Klamann alleged that he had found in cholera nostras similar bacilli and spirilla to those of Finkler and Prior. Klamann sent preparations, partly from dejections, partly from cultivations, to Koch, and neither this investigator nor other microscopists have been able to find anything like curved bacilli or spirilla in them.

The so-called comma-bacilli found by Lewis in the saliva, and long known to Koch, are longer, slenderer, and more pointed at the ends than the cholera-bacilli, and, when not too deeply stained, appear less dark at the ends than in the middle. But more important than the morphological differences are the biological. For, unlike the cholera-bacilli, these bacilli of the saliva do not develop in neutral or weakly alkaline cultivation-fluids, and the distinction between the two kinds is thus easily made.

Drs. Finkler and Prior are reproached with having entered on their difficult problem with insufficient knowledge and preparation. The fact that their cultivations were made on potatoes or on moist linen instead of on gelatine, deprived them of the particular advantage of the latter method—viz., an assured separation of the different varieties by successive cultivations, for one individual bacterium cannot be thus dealt with, but only a majority of different bacteria. The potato-culture affords no protection against the predominance of other kinds, which thrive very well by this method. Later impurities may also have occurred, and there is no guarantee that the ultimate appearances are due to the original inoculation.

Moreover, the ideas of Drs. Finkler and Prior on bacterial spores are diametrically opposed to our knowledge of bacteriology, because they regard the stained ends of the bacillus as spores, instead of looking for them in the unstained middle portion. On these and the above grounds, their assumptions regarding further conditions of development are devoid of a firm basis.

A cultivation sent to Koch by the above observers as 'pretty pure,' and obtained from 'decomposed dejecta,' showed four different kinds of bacilli on cultivation in gelatine. Of these, the individuals of one kind only were slightly curved or citron-shaped. On drying and staining, they presented a certain resemblance to comma-bacilli, but were on the whole plumper and larger, and developed more energetically both in gelatine and in potatoes. The separate colonies in gelatine were of an uniformly round shape under a low magnifying power, presented a finely granular appearance, and quickly fluidified the gelatine for a good distance round. The colonies formed by 'cholera-bacilli,' on the other hand, are not uniformly round, but have a zigzag periphery, are bright in appearance, of a long funnel-shape, and do not fluidify the gelatine like other bacteria. Similar differences are found in cultivation experiments in test-tubes. On potatoes, the bacteria of Finkler and Prior developed rapidly at a temperature of between 17° and 19° C., forming a pale yellowish-grey mucous mass, and the potato appeared white at the periphery of this. 'Cholera-bacteria' do not grow in potatoes at this temperature, but only in a proper apparatus, where they slowly develop to dark brown colonies.

Koch is in doubt as to whether the above bacteria originated in the intestine, and not rather in the decomposing dejecta and fluids after death. In preparations from fresh dejections, only the ordinary bacteria were found, but no comma-bacilli.

Three cases of cholera nostras (two of which were fatal) and one case of arsenic poisoning (which succumbed on the tenth day) were most carefully examined by Koch, but with negative results. Moreover, hundreds of separate observations, recently made at the Sanitary Institute of Berlin on dejections from healthy and diseased persons, saliva, and buccal mucus, have never afforded the true 'comma-bacillus.'

Comma-bacilli, says Koch, are specific bacteria, belonging exclusively to cholera Asiatica.

In connection with the experiments of Rietsch and Nicati (vide *Berliner Klin. Woch.*, No. 35) a very diluted pure culture—hardly the hundredth of a drop of the culture fluid was used—was injected into the duodenum, without tying the ductus choledochus. With few exceptions, the animals died after a day and a half to three days. The mucous membrane of the intestine was reddened; the contents were watery, colourless, or slightly reddened, and at the same time flocculent. The comma-bacilli were found in the intestinal contents in a pure culture, and in extraordinary quantity. In other words, the same appearances existed as after fresh cholera. A simultaneous intoxication from poisonous products, which might be present in the culture fluid used for injection, is excluded by the smallness of the quantity taken. E. J. Edwardes, M.D.

Article 3421.

TIBALDI ON THE PROCESSES PROPOSED TO DILUTE THE BLOOD OF CHOLERA PATIENTS.

Dr. Tibaldi has made a series of experiments on dogs to determine the value of the various processes proposed to dilute the blood of cholera patients, and gives the results in the *Gazz. Med. Ital. Lombardia*, Nov. 1 and Nov. 8. The experiments were

twelve in number: five of intravenous injection, three of intraperitoneal injection, and four of hypodermic injection.

Intravenous Injections.—A solution of 5 per 1,000 of chloride of sodium, at a temperature of 37° to 40°, was used. The apparatus consists of three principal parts. 1. A Wolff bottle of four-litre capacity contains the sodium-chloride solution; the India-rubber cork closing the centre aperture being traversed by a thermometer and a glass tube, with a bulb containing sterilised cotton-wool. The corks of the lateral apertures are traversed each by a syphon-shaped glass tube, the longer arm going to near the bottom of the bottle. To one of these a small India-rubber tube, about four mètres long, is attached, serving to conduct the solution from the bottle to the vein. 2. A quadrangular tin box, ten to twelve litres in capacity, is used for a water-bath, which can be suspended by a hole in the prolongation of its posterior wall. This box contains the Wolff bottle, and on its anterior wall a piece of glass is inserted, five or six centimètres wide, marked off in divisions of 100 grammes, corresponding to the capacity of the Wolff bottle. At the bottom of the box is a tubular opening, to which is fastened a large India-rubber tube, closed at the end by a tap. Through this tube and tap the tube carrying the solution is passed, and made fast to the cannula. 3. The cannula is like that ordinarily used for transfusion of blood, the stylet being made to act as an air-tight piston. The apparatus is hung up at the height of 2½ feet above the operating table. The bath is filled with hot water, which also flows down the larger tube, thus surrounding the smaller carrying the solution. In this manner, if the tap at the larger end be occasionally opened to allow a little of the water to escape and fresh hot water to take its place, the solution does not lose more than 1° Cent. of heat in two hours; and the solution flows into the cannula less than 1° below that marked by the thermometer in the Wolff bottle. The velocity with which the liquid flows from the cannula is 100 grammes in forty-five seconds; if the apparatus be raised to 5 feet, the velocity would be 100 grammes in twenty seconds. From these data, the resistance with which the liquid is met in the vein can be inferred. In the dogs operated on, the femoral vein was chosen. The dogs were copiously purged with salines, and kept for several days without drinking, so as to assimilate their blood to that of cholera patients. None of the grave accidents feared in intravenous injections occurred. The operation is simple and easily done. The introduction of a large quantity of the sodium-chloride solution into the circulation (even to double the total mass of blood) is perfectly innocuous.

Intraperitoneal Injections.—The same solution and apparatus was used, a small trocar being substituted for the intravenous cannula. Perforation of the abdominal wall was made two fingers below the umbilicus. The results were that the introduction of a large quantity of liquid into the peritoneal cavity is innocuous. Diminution of the thickening of the blood occurred just as in intravenous transfusion, but more slowly. The diminution of the density of the blood here also is all the more marked, the greater the thickening anterior to the operation. The pressure of the liquid injected on the bladder and on the intestine caused a constant flow of urine and vomiting or defæcation.

Hypodermic Injection.—The liquid used was that recommended by Professor Cantani: chloride of sodium 4 parts, carbonate of soda 3 parts, distilled water 1,000 parts. In the second experiment 0·20 per 1,000 of carbolic acid was added, and in the third 0·75 per 1,000 of thymol. The same apparatus was used with a capillary trocar as in the last experiment; the needle of the Pravaz's syringe does very well. The part chosen for the injection was the internal part of the thigh and the neck. The operation is painful but innocuous. The absorption of the liquid injected is rapid, and commences directly after the injection. The effect on the blood is proportionately equal to that obtained in the other processes; here also the greater the density of the blood, the greater the diminution obtained. In none of the experiments was blood or albumen found in the urine.

Of the comparative value of these different processes, the author concludes that intravenous injections have the most prompt and lasting effect. A large quantity of fluid can be injected into the current of the circulation, notably reducing the density of the blood, and thus a certain lapse of time must intervene before the loss by the intestine reduces the blood to its primary state of density. Intraperitoneal injections allow a large quantity of fluid to be injected, but absorption is slow, some of the fluid being found in the peritoneal cavity thirty hours after the injection. Hypodermic injection allows the introduction of a limited quantity only. Absorption, as in intraperitoneal injection, begins at once, but the liquid is not completely absorbed for some time. It has the advantage of being very easily done, of requiring no special precautions, and of not leading to any grave consequences. It must be argued from analogy that all three processes may be practised with immunity on man. In the treatment of cholera they are indicated on the appearance of the algide stage; which process must be followed must depend on the actual conditions of the case, and controlled by cytometric examination of the blood. Where the symptoms of the algide stage are slight and the gravity of the asphyxic symptoms is not urgent, hypodermic injection is to be preferred. The most favourable sites for the injection are the upper and inner surface of the thigh, the leg near the popliteal region, and the upper third of the arm. In these regions 3 to 4 litres and even more may be injected. When the asphyctic symptoms are urgent, intravenous injection is best, the veins of the forearm and internal saphenous being chosen. Finally, when intravenous injections are rendered impossible from the imminence of the danger, or because a superficial vein which will carry the cannula cannot be found, intraperitoneal injection is indicated; the injection must be as large as can be borne, so as to obtain prompt absorption, which is favoured by the tension of the abdominal walls. It is possible, too, that the mechanical action on the intestine of the liquid injected may influence its circulation, and modify the conditions of the transudation from the abdominal vessels. G. D'Arcy Adams, M.D.

Article 3422.

KNAPP AND OTHERS ON HYDROCHLORATE OF COCAINE.

Dr. Knapp, Professor of Ophthalmology in the Medical Department of University of the City of New York, writes in the *New York Med. Record*: As soon

as I had read the very remarkable communication on cocaine, by Dr. H. D. Noyes, in *The Medical Record*, Oct. 11, 1884, p. 417, I procured specimens of the new remedy from different sources—Mr. F. W. Foucar, New York; Dr. E. R. Squibb, Brooklyn; and Messrs. Eimer and Amend, New York—and tried its action on myself, some members of my family, and a number of patients. Since that time some short communications on the same remedy have appeared by Drs. C. R. Agnew, W. O. Moore, and J. L. Minor (*The Medical Record*, Oct. 18, 1884, pp. 438, 439). My observations substantially confirm the statements of these gentlemen. The novelty and importance of the subject may excuse the hasty publication of some experiments and observations, which I will describe without much comment as they have suggested and presented themselves to me. As only Dr. Moore mentions something about the substance itself, I looked up, in the desire for further information, some books on pharmaceutical chemistry. The works which I have consulted are: *The U.S. Dispensatory*, thirteenth edition, 1870, p. 1591; the same, fifteenth edition, 1883, pp. 563–565; and through the kindness of Messrs. Eimer and Amend, Fehling's *Handwörterbuch der Chemie*, 1875, Vol. ii., pp. 752, 753; and Hager's *Handbuch der Pharmaceutischen Praxis*, 1874, First Part, pp. 903–905. From these books I extract the following pharmacological notes, which may not be without interest.

Cocaine is the alkaloid of the leaves of erythroxylon coca (Lamarck), a shrub growing wild and extensively cultivated in South America, especially in Peru and Bolivia. The leaves resemble those of Chinese tea, and their action is similar to that of tea and coffee. The alkaloid was first isolated from them in 1855 by Gaedeke, who gave it the name erythroxyline; but Dr. A. Niemann, of Goslar, Germany, was the first to thoroughly investigate the leaves in 1860. He gave the alkaloid the name cocaine. Lossen, who followed in his footsteps, analysed it and expressed its composition by the following formula: $C_{17}H_{21}NO_4$. 'It acts upon the lower animals much as does theine. It tetanises frogs, or in overwhelming doses paralyses the sensory nerves and the posterior columns. Rabbits and dogs are killed by it through paralysis of the respiratory centres. In proper doses it elevates arterial pressure by an action upon the vaso-motor centres and the cardiac-motor system.'

'As a nerve-stimulant, coca has been used immemorially by the Peruvian and Bolivian natives. Its sustaining powers have been strongly confirmed by various observers both in this country and in Europe' (U.S. Disp.).

Lossen found in the best quality of coca-leaf 0·04 per cent. of cocaine; inferior material yielded only 0·016 per cent. It dissolves in 704 parts of water, but easily in alcohol, ether, and diluted acids. Its salts are soluble in alcohol, not in ether. They have a bitter taste, and cause in the tongue a transient feeling of numbness at the place of contact (Fehling).

'The coca-leaves have been recommended for almost all diseases, but the therapeutic results have proved unsatisfactory and the remedy has become obsolete. The action of cocaine is very much like that of atropine, with the difference that it does not dilate the pupil. . . . Extractum cocæ is prepared like extractum absinthii. It is said to have a dilating effect on the pupil' (Hager).

Dr. H. D. Noyes states in his communication (Medical Record, p. 417), 'The solution [of muriate of cocaine, 2 per cent.] caused no irritation of any kind, nor did it at all influence the pupil.'

Experiments with Cocaine on the Eye.—In my first experiments with a 2 per cent. solution upon patients during various operations I noticed no dilatation of the pupil, but, on trying it afterwards on a patient with ocular neuralgia, and watching it longer, the mydriatic effect of the drug was manifest. The same occurred with another patient in whom I slit a canaliculus and opened the distended lacrymal sac. Relying on Dr. Noyes' assertion and my previous observations—I had at that time not read the contradicting statements of Hager—I suspected that I had contaminated my supply of cocaine with atropine by using a dropper which had been taken from a bottle formerly containing duboisine, though I had carefully cleansed the dropper and used it in six instances without noticing mydriasis. I procured fresh supplies of cocaine in new glasses, provided with droppers that had never been used. This I used upon myself and four members of my family, watching it a whole afternoon and evening. The mydriatic effect of cocaine of a 2 per cent. as well as of a 4 per cent. solution was positive and pronounced in all. These *experiments upon myself and four other healthy persons* need not be described *in extenso*. The following may suffice.

The instillation of a 2 or 4 per cent. solution of hydrochlorate of cocaine into healthy eyes *produces no pain, nor any discomfort*. During and after its action the conjunctiva does not change its aspect; it is neither swollen nor congested. The appearance of the fundus oculi, examined ophthalmoscopically, likewise remains unchanged. The same holds with regard to the movements of the eyeball. If there is any change in the *tension* of the globe, of which I could not positively convince myself, it is rather toward a diminution than toward an increase.

The *diminution of sensibility* in the cornea and conjunctiva varies in degree in different individuals. In most cases it becomes manifest as early as three minutes after the first instillation, increases for ten to twenty minutes, then decreases, and is over in about half an hour. When another instillation is made, from ten to twenty minutes after the first, the anæsthesia is more intense, on superficial touching mostly absolute, and lasts longer. In an hour after the first instillation it becomes very feeble, and in an hour and a half it disappears.

The *pupil begins to dilate* ten to twenty minutes after the instillation, increases slowly, becomes in some persons as large as with atropia in about thirty to forty-five minutes, remains stationary for about thirty minutes, and then slowly disappears. The last trace had disappeared on the next day only.

The *range of accommodation is shortened* by moving of the near point from the eye, the far point not being appreciably influenced. The shortening of the range of accommodation was limited and differed somewhat in different observers: in myself it was equivalent to $\frac{1}{36}$ (1 D); in my son, fifteen years of age, about the same; in Mrs. K—— it was more. Cocaine, therefore, affects the accommodation like the mydriatics. It reduces, but does not paralyse it. It may, therefore, be preferable to other mydriatics if we want to dilate the pupil for ophthalmoscopic examinations of the interior of the eye, but it will probably not be powerful enough for determinations of refraction. It is a mydriatic

which, even in producing a maximum dilatation of the pupil, takes away only a fraction of the power of accommodation. In Mrs. K——'s and my own eye astigmatism manifested itself very conspicuously; the letters appeared to slant from left to right; the left eye of both of us was 'cocainised.' With her the slanting was more perceptible in near vision, with me in distant vision. The letter N slanted about fifteen degrees to the right, and was turned straight by a $+\frac{1}{72}$ c. ax. 110°, also by a $-\frac{1}{72}$ c. ax. 15° or 20°, the same with a $+\frac{1}{144}$ c. 110° ⌔ $-\frac{1}{144}$ c. 20°.

The accommodative power was restored much sooner than the normal size of the pupil. In one and one-fourth or one and one-half hour we could read again as easily as before, though our pupils were still considerably enlarged.

Cauterisation of a 'cocainised' conjunctiva.—The conjunctiva of my right eye was a little congested, and at 10·30 P.M., while writing this communication, I dropped a drop of a 4 per cent. solution of hydrochlorate of cocaine on the inner surface of the lower lid. Fifteen minutes later I noticed that this inner surface had become pale, paler than that of the left eye, which had been the paler before. I dropped another drop in, holding my head back so that the whole conjunctiva was moistened by it. Then I painted, before a looking-glass, a good-sized camel's-hair brushful of a 2 per cent. solution (gr. x. ad ʒj.) of nitrate of silver into the eye, the lower lid being everted. I left the liquid in place about twenty seconds, then it began slightly to smart, whereas immediately after the application I only felt the cold, no pain. I washed the nitrate of silver away with ordinary water, and put another drop of cocaine in. This relieved the smart for five minutes, then it returned, but very slightly; a serous liquid ran from my right nostril, just as it does when a stronger solution of nitrate of silver is put in the eye in the ordinary way. I instilled another drop of cocaine and continued writing. In a quarter of an hour the eye felt hot and somewhat painful. The conjunctiva of the lower lid was moderately, that of the adjacent scleral conjunctiva slightly, red, and along the whole lower fornix lay a white streak of mucus. The cornea and upper scleral and palpebral conjunctiva were white as if nothing had been done. The pupil was wide, and the accommodation somewhat weakened, not so much as to make writing unpleasant, though the other eye had been 'cocainised' in the afternoon of the same day.

EXPERIMENTS ON THE EFFECT OF COCAINE ON OTHER MUCOUS MEMBRANES. 1. *The ear.*—I have made only one experiment in this locality. It was successful; see later, Case VIII. I do not doubt that the remedy will find here a large field of application, both to allay pain and to render the parts insensible during operations in this exceedingly sensitive cavity.

2. *The mouth.*—I can confirm the former observations that the tongue and the soft palate become numb. I sprayed and brushed my soft palate; in ten minutes I could pass instruments over it without pain or reflex phenomena, retching, &c. I brushed a 4 per cent. solution over the right half of my tongue from the tip to the palate, held the tongue depressed with my finger and immovable as long as I could endure it. In seven minutes I repeated the manipulation; five minutes later the right side of the tongue and corresponding lip felt numb. Gentle touching was not perceived, but quite well on the other side. Then I put, with a fine brush, some powdered sugar on the insensible parts, successively from the tip to the neighbourhood of the palate. It was not perceived, whereas when put in the same way on the corresponding places of the other half of the tongue, it was at once tasted. The same was the case when common salt and a 1 per cent. solution of sulphate of quinine were placed on the tongue. In half an hour all was normal again. Conclusion: *Cocaine temporarily and locally destroys not only the sensibility of the tongue and pharynx, but also the faculty of taste.* In the endeavour to suspend the sense of taste altogether, I sprayed my mouth and palate. The taste was much reduced, but not abolished, evidently because the remedy in this experiment had not sufficiently acted on all the portions of surface from which impressions of taste are received.

3. *The nose.*—I brushed and sprayed the nose to test the action of the new remedy on the organ of smell. The experiments required a good deal of time and material before they were successful. The lower parts of the nose soon had a numb feeling and were insensible to the touch, but the power of smell was preserved. Bearing in mind that olfaction is the function of the upper nasal passages, the recesses of which are very difficult of access, I bent my head down so as to make the vertex its lowest part, and introduced the bent nozzle of a Richardson atomiser in such a way that the spray was directed from the lower to the middle and upper nasal passages, and the liquid flowed also in the same direction. This manœuvre had to be repeated three times before the faculty of smell was destroyed. Perfumes of rose and heliotrope were not perceived. Tincture of iodine, concentrated nitric acid, &c, produced no peculiar sensation, whereas on the other side they felt very unpleasant, and produced coughing. *Cocaine*, therefore, *temporarily renders the mucous membrane of the nose insensible and destroys the sense of smell.* In less than half an hour the whole effect of the remedy had vanished.

4. *The larynx and trachea.*—I am just suffering from an attack of acute bronchitis, with fits of troublesome coughing in the morning and evening. When one of these fits came in the evening, I sprayed my larynx with cocaine and inhaled it as well as I could by means of a Richardson apparatus. The irritation was at once allayed, and soon subsided. I had no cough, but half an hour later I expectorated, free from irritation, a large, compact, muco-purulent sputum. If this experiment should be confirmed by others, and the effect be the same or similar, cocaine will prove a great boon to patients with pulmonary difficulties. The perfected methods of introducing medicated substances by means of the ingenious apparatuses of Dr. Sass would relieve the distress of coughing and its prejudicial consequences. I may add, however, that the Richardson apparatus, which seems inadequate for this purpose, relieved me only partially in a second, and not at all in a third attack during the night.

5. *The urethra.*—My urethra is very sensitive to the introduction of instruments. I injected, by means of a Eustachian catheter and a balloon, a 4 per cent. solution of cocaine, and held it in for a few minutes. In ten minutes, the glans had become pale and insensible to the touch. I repeated the injection. Seven minutes later I introduced a catheter and other instruments into the urethra. I did not feel them at all as far as three inches; when pushed farther I felt them very unpleasantly painful.

Evidently the cocaine had not penetrated more deeply. Before the injection of cocaine I felt the instruments very keenly from the beginning of the urethra. To test the loss of sensibility of the cocainised urethra in another direction, I injected a 1 per cent. solution of nitrate of silver into the anterior part by means of an Anel's syringe, introduced as far as one inch and a half. I had no sensation from it at all. In about thirty seconds I passed urine, which caused a slight burning, disappearing in about a minute. Since that time I have not felt anything from the treatment of my urethra. This experiment shows, and I feel convinced, that cocaine will prove most beneficial in urogenital surgery. It not only destroys the sensibility of the parts, and therefore admits of the easy performance of many surgical procedures, but by being painless these procedures will not incite reflex phenomena, spasm, and the like.

6. *The rectum.*—For the sake of completeness I injected also cocaine into the rectum. The sensibility, which was not great anyhow, was reduced.

In concluding this communication I will describe the APPLICATION OF COCAINE IN DISEASES OF THE EYE, such as opportunities have presented themselves to me thus far.

CASE I.—A young lady, suffering from convergent strabismus, had, Oct. 15, 1884, two drops of a 2 per cent. solution of hydrochlorate of cocaine, just obtained from Mr. Foucar, dropped into her eye at 4 P.M., before the students of the New York Ophthalmic and Aural Institute. Three minutes later the sensibility of the cornea, tested with tissue paper and blunt probes, was unmistakably diminished. Ten minutes after the first application, when the sensibility of the cornea and conjunctiva was greatly reduced, but not abolished, two drops more were instilled. Five minutes later the anæsthesia was complete, when the cornea and conjunctiva were gently touched, but not when the squinthook was passed high under the upper lid. Twenty minutes after the first instillation the wire speculum was inserted, the conjunctiva grasped with forceps, cut with scissors, the hook introduced, the tendon divided with scissors, and the conjunctival wound closed with a suture. All this was felt as pain by the patient, yet not very keenly. The sensibility was not abolished, but appeared blunted.

CASE II.—Oct. 16, 1884. I instilled two drops of the above solution into the eye of a lady who had a cinder in the centre of the cornea. In ten minutes the cornea was anæsthetic. I removed the cinder by means of a delicate gouge, with very little, yet not without, pain. The removal was easy.

CASE III.—Oct. 16. The same solution was instilled into the eye of a man having a pterygium. Ten minutes later, instillation was repeated. The cornea and conjunctiva became insensible. During the operation—transplantation into the lower fornix and covering the defect with the adjacent conjunctiva by a stitch—the patient manifested about as much pain as this operation usually causes when performed without an anæsthetic.

The anæsthesia in these three cases disappeared almost immediately after the operation.

Seeing that the effect of the new anæsthetic in these three operations had not come up to my expectation, nor to what was claimed for it, I asked Dr. E. R. Squibb whether he could furnish me a 2 per cent. solution of the remedy. He sent me a 4 per cent. solution, remarking in a letter that the 2 per cent. solution had been extensively tried by Dr. C. S. Bull, and proved only partially satisfactory. He had prepared for Dr. Bull, at his suggestion, a 4 per cent.

CASE IV.—Of this solution I instilled, on Oct. 17, at the New York Ophthalmic and Aural Institute, in the presence of the students, a few drops into the eye of a cataract patient, aged 68. In twenty-five minutes, during which time he had held his eyes closed, there was complete anæsthesia of the cornea and conjunctiva. I instilled a few drops more. Five minutes later I performed the extraction of cataract in the usual manner, asking the patient at every step whether he felt any pain. Only when the iris was drawn out and cut he said that it hurt him. The corneal section gave him no pain. The expulsion of the lens, which was done by pressure with a spoon on the lower segment of the cornea, required more force than usual, though the section was perfectly sufficient and the capsule not thickened. The eye appeared inelastic, so that the expulsive force requisite had to be imparted by outward pressure. The cleansing of the wound, the stroking back of the iris out of the cornea, and the adjustment of the flap with a spatula were not felt at all. When the bandage was applied the parts were still insensible, but free from all irritation. The patient had felt no pain, except when the iris was seized and cut; he laughed during the whole performance, and when it was finished he exclaimed, 'What! is that all? I have scarcely felt anything.' He had some pain in the first thirty-six hours, but no inflammatory irritation.

CASE V.—Oct. 18: Mr. B——, aged 30. Cinder in cornea, surrounded by a white ring, circum-corneal injection marked; since yesterday. Three drops of 4 per cent. solution. Removal twenty minutes later. Cornea insensible. The digging and scraping caused no rolling of the ball, no winking with the lids, no pain. Even when I held only the lower lid down and left the upper free, the manipulation caused no closure of the lids.

CASES VI. and VII.—Oct. 18: Old *trachoma.* Insensibility of cornea and conjunctiva; touched with sulphate of copper. No pain, no irritation, scarcely any increased congestion after the application. No discomfort as when touched before.

CASE VIII.—Oct. 18: *Polypi auris* after removal of exostosis; very painful. The sensibility in scraping them out was decidedly diminished in the superficial layers, not in the depth after two instillations of cocaine.

CASE IX.—Oct. 19: Mrs. N.——, aged 56. Conjunctivitis of both eyes, *tumor sacci lacrymalis* of the left. Four per cent. cocaine, six drops in conjunctival sac and on lacrymal points; ten minutes later cornea and conjuctiva anæsthetic, pupil slightly dilated. Tension of globe the same. The introduction of Weber's knife through one-half of the canaliculus is not felt, the pushing forward into the sac and slitting the inner wall of the sac, and passing a thick probe into the nose, are felt painful, but it seems less than usual.

The action of hydrochlorate of cocaine has also been tested in this country and on the Continent in affections of the eye and other conditions.

In the *New York Med. Record*, Nov. 15, 1884, Dr. Bosworth contributes an interesting article on this subject. In using a solution of cocaine for its anæsthetic effects in the nasal cavity, he found that it was followed in about twenty to thirty

seconds by a very notable contraction in the venous sinuses underlying the part which it reached, and that, as the application was continued over the whole mucous membrane covering the middle and inferior turbinated bones, the tissues became so rigidly contracted that all the blood they contained was expelled, the membrane adhering so tightly that the bones became visible in their absolute outline. The experiment was repeated in over forty cases with the same result. The strength of the solution was 2 per cent., and was applied by means of a pledget of cotton-wool wrapped on a small probe. The effect was usually observed in a few seconds, and in about three minutes entire depletion of the sinuses of the cavity was accomplished. Anæsthesia, as a rule, took a slightly longer time to be established. Dr. Bosworth insists upon the use of cocaine in the following affections of the nose: hypertrophy of the nasal mucous membrane, acute coryza, hay-fever; and for controlling swelling and bleeding in the removal of nasal polypi. He ascribes its action to its producing contraction of the muscular fibres which surround the venous sinuses on the nose. He has never seen it exert any influence on the capillary circulation of the mucous membranes generally, and regards the action in the muscular fibres of the sinuses as tetanic, as the membrane after its use clings to the turbinated bones with a rigid clasp which can only be described as tetanic. He sums up the uses of cocaine in nasal surgery as follows. (1) To control the exacerbations of hay-fever; (2) to relieve the more distressing symptoms of acute coryza, and curtail its duration; (3) to control the painful and distressing reaction which results from the use of caustics or instruments in the nasal cavity; (4) to completely empty the venous sinuses of the nasal mucous membrane, and thereby afford a thorough ocular inspection of the cavities; (5) to largely eliminate from our minor operations in the nasal cavities the troublesome hæmorrhage which often occurs, and to control epistaxis from whatever cause.

[The Reporter has used cocaine, as advised by Dr. Bosworth, in a case of hypertrophic nasal catarrh. The mucous membrane covering the turbinated bones perhaps became a little paler after its use, but the effects observed by Dr. Bosworth were certainly not produced in this case. Nor did the cocaine exert any appreciable anæsthetic effect on the mucous membrane of the nose generally. The fault, therefore, was probably in the specimen of cocaine. It was obtained at the Hospital, and a 20 per cent. solution was used.—*Rep.*]

At a recent meeting of the Leeds and West Riding Medico-Chirurgical Society Mr. Hartley gave a practical demonstration of the effect of hydrochlorate of cocaine upon the eyeball. A drop of a 2 per cent. solution was placed in the healthy conjunctival sac of a patient, with the result that in a few minutes the eyelids could be separated by a speculum, and the eyeball manipulated in various ways, with complete absence of painful sensation on the part of the patient. Mr. Hartley had used the cocaine in many instances, partly experimentally, and also in many minor eye operations, with undoubted advantage; but, as the anæsthesia did not extend to the deeper structures of the eye, he thought its use must be comparatively limited. Dr. Clifford Allbutt said that he had used it advantageously for laryngoscopic work.

Since the introduction of Coca to the notice of the profession by Abt in 1865 much has been written upon its remarkable sustaining and tonic properties, as may be seen by a reference to sect. 455 : 4 of the *Medical Digest*, but nothing that has been ascribed to this wonderful plant has equalled in interest or importance Dr. Koller's recent discovery of the marvellous power when a small quantity of its active alkaloid Cocaine, or Cucaine, as Sir R. Christison suggests for its correct appellation, has, when locally applied, of causing anæsthesia of the eye and larynx. The accuracy of Dr. Koller's observations are now placed beyond doubt by the concurrent testimony of numerous practitioners, so that daily painless operations are performed upon the eye by instilling a 2 to 4 per cent. solution therein. In the *Lancet*, Nov. 1884, p. 911, Mr. Bader reports eleven cases in which it at once relieved either the pain of photophobia, and allowed painless operations in cases of strabismus, irideotomy, extraction of tumour from the lids, or of cataract. In the *Brit. Med. Jour.*, Dec. 1880, p. 1074, Dr. Prosser James speaks highly of its value in a variety of cases, especially in operations about the lips, tongue, fauces, and larynx. In the *Med. Times and Gazette*, Dec. 1884, p. 759, may be found a series of similar observations, taken at Vienna, which are full of interest. In the *Lancet*, July 1880, p. 176, are some valuable observations made by Dr. Pantelejeff upon the physiological action of cocaine, and also in the London Medical Record, April 1884, p. 161, by Dr. Aschendbrandt.

Article 3423.

COCAINE: THE NEW LOCAL ANÆSTHETIC.

The literature of this subject has already attained such extensive proportions that it is no easy matter to cope with it. Cocaine appears to have been first isolated and extracted from the leaves of the coca plant (*Erythroxylon Coca*) by Niemann in 1860, although some would claim the honour for Gadeke. In 1862, Lossen discovered in the same leaves a second principle which was named hygrin, and was found to be of a volatile nature. The other constituents of the plant are ecgonine, coca-tannin, and a peculiar wax. It is said that the yield of cocaine from the leaves is not more than from 0·02 to 0·2 per cent.

Cocaine has a bitterish taste, and crystallises in shining monoclinic prisms.* Its chemical formula is $C_{17}H_{21}NO_4$. It is soluble in 704 parts of water, and also dissolves readily in alcohol, chloroform, ether, oil of cloves, vaseline, and castor-oil. When treated with strong hydrochloric acid, it forms ecgonin. It unites with acid to form salts, the best known being the hydrochlorate, the citrate, the salicylate, the nitrate, the sulphate, the oxalate and the tannate. The muriate or hydrochlorate is the salt in common use. It consists of small, white needle-shaped crystals, which in some specimens are so minute that the powder appears to be amorphous. It has a peculiar

* 'The History and Properties of Cocaine.'—*The Medical Record* (New York), Nov. 8, 1884. 'Hydrochlorate of Cocaine, the New Local Anæsthetic.'—*British Medical Journal*, Nov. 29, 1884. 'Cocaine and its Salts.' By E. Merck, Darmstadt. 1884. 'Cocaine and its Salts.' By William Martindale. London: 1884.

characteristic odour, and is soluble in water (1 in 4) and in alcohol. It possesses antiseptic properties, a 5 per cent. aqueous solution delaying the putrefaction of meat for some days. The citrate occurs in the form of small white crystals, and is the salt best adapted for dental operations.

Respecting the physiological action of the drug, it may be said that comparatively little is known. Niemann, as long ago as 1860, noted the fact that when applied to the tongue it produced anæsthesia. Schroff, in 1862, found that doses of 5 centigrammes administered to rabbits gave rise to disturbance of pulse and respiration, and also produced temporary mydriasis. Fronmüller, a year later, showed that doses of 3 to 33 centigrammes caused in man little or no disturbance. In 1874, Dr. Hughes Bennett* published his well-known experimental inquiry into the physiological actions of theine, caffeine, guaranine, cocaine, and theobromine, and demonstrated that cocaine exerted its influence chiefly on the sensory nerves, and was an anæsthetic. In 1876, Dr. Ott published a paper on cocaine, and showed that it dilated the pupil.† These observations, however, appear to have been forgotten; and although various preparations of coca have been largely employed as therapeutic agents, the active principle itself was rarely used, and its very existence was probably unknown to the majority of medical practitioners. Suddenly, however, the whole aspect of affairs was changed. On Sept. 15, 1884—a date long to be remembered in the annals of therapeutics—Dr. Karl Koller, of Vienna, demonstrated through his friend Dr. Brettauer, of Trieste, at the Ophthalmological Congress at Heidelberg, the action of a solution of cocaine when applied to the eye. Dr. Koller, it appears, had long been aware that cocaine acted as a local anæsthetic to the larynx, and it occurred to him that similar results might be obtained if it were used for other mucous membranes. At the Heidelberg Clinic two drops of the solution were dropped into the eye of a patient experimentally, and in a few minutes it was noticed that the sensitiveness of the surface was below normal. A drop or two more and the anæsthesia was complete; a probe was pressed upon the cornea until its surface was indented, it was rubbed over the surface of the cornea, it was rubbed over the conjunctiva, a speculum was introduced and separated the lids, and they were stretched to their utmost, the conjunctiva was seized with a pair of forceps, and the globe was moved about in various directions, but there was no pain, and the patient declared that he experienced no inconvenience of any kind. Before the experiment the eye had been tested, and was shown to possess the normal sensitiveness; the other eye, which was not treated, remained in this respect perfectly normal. At first a 2 per cent. solution was used, but subsequently it was increased to 4 per cent.

A knowledge of this wonderful discovery spread quickly, and in a few days there were hundreds of workers in the field which had been so suddenly opened to them. Cocaine was dropped into the eye, rubbed into the skin, applied to the larynx and pharynx, and even injected into the rectum and vagina. The price of the drug rose rapidly, and physicians were found only too pleased to pay half-a-crown a grain for the privilege of trying it. Every one seemed anxious to do something to associate his name, in however small a degree, with so momentous a discovery. The result has been the publication of a host of papers and articles, many of them displaying only too obviously the signs of haste and crude experimentation. Many of these productions are best left unnoticed, but there are several important papers which will well repay attention.

Professor Agnew,* of New York, in recording his experience, says :—'We have used the new agent in our clinic, at the College of Physicians and Surgeons, with most astonishing and satisfactory results. If its further use should prove to be equally satisfactory, we shall find that we possess an agent for the prevention of suffering in ophthalmic operations of inestimable value. It is difficult to avoid expressions of extreme enthusiasm in view of what we have today seen, and in view of what we may rationally expect from further applications of the agent.' He gives details of six cases in which various operations on the eye were performed with no other anæsthetic than cocaine, the results in every case being most satisfactory.

Professor Knapp, of New York,† as the result of observations made on himself and members of his family with a 4 per cent. solution, found that cocaine possesses well-marked mydriatic properties. The pupil begins to dilate in from ten to twenty minutes, increases slowly in size, attains its maximum in from thirty to forty-five minutes, and then slowly diminishes. The diminution of sensibility becomes manifest in about three minutes, increases for from ten to twenty minutes, then decreases, and is over in about half an hour. The range of accommodation is shortened, the near point being moved from the eye whilst the far point is stationary. Similar results have been obtained by Dr. William Oliver Moore,†‡ Dr. James L. Minor,‡ Dr. E. O. Shakespeare,† Professor William Thomson,† and Dr. R. J. Levis,§ of New York; by Dr. Bradford,‖ of Boston; by Mr. Cowell, Mr. Anderson Critchett, and Mr. Juler, of London,¶ and by Professor Gayet, of Lyons. Many of these gentlemen have performed important operations under its influence.

Dr. St. John Roosa,** Dr. Semon,†† Dr. Goodhart,‖‖ and other observers, have used it to produce anæsthesia of the larynx, pharynx, and other parts, and one and all declare that the effects are most remarkable. In many forms of ear-disease it has been found especially beneficial. Mr. Brock and Mr. Arkle,†† of University College Hospital, London, have used it hypodermically in two minor operations, and speak well of it. In cases of supra-orbital neuralgia, a 10 or even a 20 per cent. solution in oil of cloves rubbed into the part affords almost immediate relief. There is no case of poisoning on record, and in one instance a gramme and a half produced very little effect. There can be no doubt that it is a most useful remedy, and that it will prove of great value in the treatment of a large number of painful affections.

William Murrell, M.D.

* *Edinburgh Medical Journal*, Vol. xix., 1873-4.
† *The Medical Record*, New York, 1876.

* *The Medical Record*, New York, Oct. 18, 1884.
† *The Medical Record*, New York, Oct. 25, 1884.
‡ *The Medical Record*, New York, Oct. 25 and Nov. 8, 1884.
§ *The Medical Record*, New York, Oct. 18, 1884.
‖ *The Medical Record*, New York, Nov. 8, 1884.
¶ *British Medical Journal*, Dec. 6, 1884.
** *Boston Medical and Surgical Journal*, Nov. 6, 1884.
†† *British Medical Journal*, Nov. 29, 1884.

ARTICLE 3424.

MERING ON CHLORATE OF POTASSIUM.

DR. J. VON MERING (*Das chlorsaure Kali*, Berlin, 1884, pamphlet, pp. 142) has carried on in Hoppe-Seyler's laboratory an elaborate experimental investigation into the physiological, therapeutical, and toxicological actions of chlorate of potassium. He finds that the salt, under the influence of carbonic and probably of other acids, is decomposed in the system with the gradual liberation of chloric acid, which tends to reduce the alkalinity of the blood; and in this lies the key to the right understanding of the action of the chlorate. Von Mering discriminates between acute and subacute poisoning by the chlorate. In acute cases—such, for instance, as result from the administration of one large dose of the salt—death results in the course of a few hours from decomposition of the blood, with symptoms of severe vomiting, profuse diarrhœa, intense dyspnœa, cyanosis, and profound cardiac depression. On section, there is found a chocolate-brown colour of the blood; whilst the organs generally, especially the kidneys, are relatively little altered in appearance. The blood contains the stored-up products of its decomposition (methæmoglobin, &c.). With a less acute form of poisoning death results—not simply from an accumulation of oxidation-products in the blood, but from the accumulation of these in the organs, especially the kidneys, leading to occlusion of the tubules, scanty urine, and uræmia. The following symptoms and appearances are observed; greyish-violet petechiæ, icterus, accumulation of hæmoglobin in the blood, changes in the red corpuscles, dyspnœa, and cardiac depression; gastro-intestinal disturbances, such as profuse diarrhœa and severe vomiting, the vomited matter being generally greenish-black; and enlargement of the liver and spleen. Functional alterations in the kidneys, such as anuria, occur; the scanty turbid urine having a reddish-brown or black colour, and exhibiting the spectra of methæmoglobin and hæmatin, and being also highly albuminous. It also contains numerous detritus-masses of red blood-corpuscles, in the form of brown cylinders or brownish-yellow flakes. Neuroses—uræmic complications, such as delirium, coma, severe vomiting, tonic and clonic convulsions, and rigidity of the limbs, are observed. The subjective phenomena are headache, anorexia, tenderness of the stomach on pressure, pains in the hepatic and lumbar regions, intense oppression of the chest, and a feeling of extreme weakness. *Post mortem* examination reveals the characteristic chocolate hue of the blood, and the presence of methæmoglobin in it; but sometimes these phenomena are absent, especially when the patient has long survived the administration of the poison, or if the necropsy be delayed for several days. The abdominal organs—spleen, liver, and kidneys—are considerably enlarged, and filled with the accumulated brown products of destruction of the red blood-corpuscles. The greatest alteration is observed in the kidneys, in which both the straight and the convoluted tubules are filled with brownish masses, partly cylindrical, partly irregular in shape. The osseous marrow is brown, and contains numerous decomposed blood-corpuscles. The gastric mucous membrane is swollen and ecchymosed.

Whilst the majority of instances of poisoning by chlorate of potassium (in which icterus and sparse secretion of reddish-brown urine occur) terminate fatally, this has not been invariably the case. A chronic poisoning by the salt is incredible; and indeed it has been observed that the prolonged ingestion of small doses of chlorate of potassium—one-quarter of an ounce to one ounce daily, in divided doses—has been followed by no injurious results; but the emptiness or fulness of the stomach, and the greater or less alkalinity of the blood, greatly influence the result. The use of the chlorate in febrile affections, when there is subnormal alkalinity of the blood, is to be avoided; and Von Mering emphatically condemns as especially dangerous to life the internal use of the salt in large doses in the treatment of diphtheria.

The author gives the following as the maximum safe doses, when the use of the salt is not contra-indicated: for adults—thirty-grain doses, with a daily maximum of two drachms: for children, aged 10 to 14 years, one drachm daily; for children, aged 1 to 10 years, thirty to forty-five grains daily; and for infants not more than fifteen grains daily, always given in divided doses.

THOS. STEVENSON, M.D.

ARTICLE 3425.

MANSON ON LIVER-ABSCESS.

IN the Medical Reports of the Chinese Imperial Maritime Customs for the half-year ending Sept. 30, 1883, is an instructive paper on liver-abscess. Its author, Dr. Patrick Manson, remarking that not many years ago recovery from this disease was so rare that to tell a man he had an abscess in his liver was tantamount to telling him he must die, proceeds to show that it is quite otherwise in our day; that, since the introduction of the aspirator, the drainage-tube, and Listerism, there is no reason whatever why an abscess in the liver should not be successfully treated in exactly the same way as an abscess anywhere else—*i.e.* by early and free discharge of its contents. Early treatment needs early diagnosis, and the great secret of successfully diagnosing abscess of the liver is (according to Dr. Manson) to 'suspect' it; for, although in a few instances the symptoms may be urgent and unmistakable, in the great majority they are highly ambiguous. Hence, when a patient is seen 'who has been out of health for some weeks or months, whose range of temperature is from 100° to 102°, or a little over or under, in the evening, whose liver is perhaps only slightly but still decidedly enlarged, and whose symptoms will not yield to remedies; if this patient have been resident for some time in a hot country, then, no matter how little urgency there may be about his general condition, liver-abscess ought to be suspected;' frequent examinations should be made, and the history and course of the disease carefully considered from this point of view. If he come to the conclusion that the patient is 'suffering from hepatitis, and that this may have gone on to abscess,' nothing should tempt the surgeon to delay making a positive diagnosis; and if matter be found, evacuating the pus and securing proper drainage and an aseptic condition. A positive diagnosis is made by means of the aspirator; and to evacuate the pus, if found, the following apparatus is necessary.

1. A trocar and cannula; the cannula four inches long and three-eighths of an inch in diameter, and provided with rings to facilitate its withdrawal.

2. A steel stilette, eighteen inches long and one-eighth of an inch diameter, with an eye at one end.

3. Eight or ten inches of stout rubber drainage-tubing, with a bore of at least one-fourth of an inch, and outside circumference considerably greater than that of the cannula.

4. A silver 'cap,' small enough to go through the cannula, and with a neck into which the stilette fits loosely, and on to which the drainage-tube can be firmly secured.

5. A Listerian dressing, with a silver tube passed through it, and flush with its under or skin side. This tube must be about two inches long, and its diameter must just admit the drainage-tube.

6. Six feet of rubber-tubing, with a bore fitting on to the short silver tube.

This last piece of tubing is filled with carbolic lotion, and clips are put on the ends. One end of the drainage-tube has for two or three inches large holes cut in it, and is secured to the neck of the cap. The end of the stilette without the eye is then passed through the drainage-tube into the neck of the cap, and the tube is stretched till its diameter is less than the bore of the cannula, and fixed thus by a piece of silk passed through the eye of the stilette. The apparatus, bandages, &c., are then brought to the side of the patient; and when he is anæsthetised, the presence or absence of pus is determined by means of the aspirator, which can scarcely be used too early, as (according to Manson) acupuncture has a beneficial effect on hepatitis, and may cure it. The aspirator is therefore to be freely used, and the liver punctured in various directions; and, if pus be found, a mental note is made of its position, and the needle withdrawn; an incision is then made through the skin, and the trocar and cannula are driven in the direction of the pus till the cavity is reached. The trocar is then withdrawn, and, when the pus ceases to flow, the drainage-tube and cap are introduced through the cannula on the stilette, and the cap is held gently against the far side of the abscess while the cannula is withdrawn. The tissues grasp the tube and prevent any flow of pus. The silk which keeps the tube on the stretch is then cut, and the tube expanding presses firmly on the tissues and effectually prevents all passage of pus except through its lumen. The stilette is withdrawn, and the cap remains in till the drainage-tube is changed. The drainage-tube is passed through the silver tube in the dressing, and the latter is carefully secured so as to prevent kinking of the tube. The long tube is then fixed over the drainage and silver tubes, the free end is placed in a bottle containing some antiseptic fluid, the clips are removed, and a continuous drain secured. If all goes well, the dressings need not be changed for a week, when the tube can be easily changed, and when inflammatory adhesions will have shut off the sac of the peritoneum. When discharge becomes insignificant, the long tube is dispensed with, an ordinary Listerian dressing is applied, and the drainage-tube is gradually shortened, care being taken that the sinus heals from the bottom.

Some of the advantages claimed for this method are its bloodlessness, its applicability to very deep as well as superficial abscesses, and chiefly that it is unnecessary that adhesions should have formed between the surfaces of the peritoneum, and it can thus be used early. The most important objections are the difficulty in keeping the dressings in position and the necessity for special apparatus. These can both be overcome by a little ingenuity, though for a deep liver-abscess the specially made apparatus is 'desirable.' Dr. Manson gives notes of two cases, in one of which he seems to have averted the formation of abscess by exploring with the aspirator; in the other he was not allowed to operate till the abscess-cavity had a capacity, he estimates, of about 30 ounces, and from it 20 ounces flowed at once on its being opened. This case became complicated with biliary fistula, and, three months after the operation, the daily discharge consisted of about 3 ounces of muco-pus and 30 ounces of bile; and, as the patient was progressively emaciating, though otherwise well, he was on the eve of departure to America to try the effect of change of air. In connection with this case are two interesting tables, showing the daily and hourly discharge of bile in relation to the amount of urine. Dr. Manson concludes that the rate of secretion of bile is 'very irregular, and has no apparent relation to the hours of eating.' Of course the untoward result in this case was in nowise due to the method; on the contrary, the obstinacy or fear of the patient prevented his having its chief advantage—early evacuation of the pus.

The apprehension of the principle of Dr. Manson's method is greatly facilitated by a few very clear diagrams, and minute details of the means employed to secure asepsis are given. His paper should be carefully studied by all who are likely to practise surgery in hot climates, for there is no doubt that Manson's is a great improvement on the waiting system hitherto very generally advocated.

John D. Malcolm.

Article 3426.

PERRONCITO ON THE ACTION OF DISINFECTANTS ON CARBUNCLE.

Professor Perroncito (*Annali Univ. di Med.*, July 1884), examining the best means of disinfection for cattle-trucks, especially with regard to carbuncle, recommended in 1881 a 5 per cent. solution of sulphurous acid. To this the railway authorities objected, as it was found to damage their property, and further experience showed that, while it destroyed the virulence of the bacilli, the spores were unaffected. Hot water, chlorine, sulphurous acid, and hyponitric acid gases were tried, but were given up as expensive, inconvenient, or inefficacious. Professor Perroncito then made a series of careful experiments to determine the best and most active disinfectant, especially with regard to the bacillus and spores of bacillus anthracis. He found the following results. 1. Solutions of from 5, 10, or 20 per cent. of chloride of sodium had no influence on the spores or bacilli, the bacilli even developing spores freely in a 5 to 10 per cent. solution. 2. Solutions of carbolic acid, 1 per cent., destroyed the virulence of the bacilli, while the spores resisted a 10 per cent. solution. 3. Spores resisted a warm saturated solution of salicylic acid, and a 50 per cent. alcoholic solution. The bacilli perished in a cold saturated solution after five minutes. 4. Carbolate of soda, 5·5 per cent., killed the bacilli, but not the spores. 5. A saturated watery or alcoholic solution of thymol killed the bacilli, but not the spores. 6. Chlorine gas, even after seven hours' action, did not give complete disinfection, but chlorine water killed the bacilli

in five minutes, and the spores in an hour and a half. The chlorine water must be freshly prepared. The method of Vitali is the best. Three kilogrammes of chloride of lime are mixed with 100 litres of water; six litres of sulphuric acid (1-5 water) are then added. Sulphate of lime is precipitated, and the chlorine formed is dissolved in the water. 7. Bromine destroys the virus liquid better than gas. 8. Sulphurous anhydride kills the bacteria in less than twenty minutes, but after 50 hours' exposure the spores are not hurt. 9. Saturated solution of permanganate of potash does not kill the spores, even after 52 hours' exposure. 10. The spores, after being kept for eight days in a solution of sulphophenate of zinc, retained their virulence. 11. Sulphuric acid, diluted to 1 per cent., added in equal parts to anthrax liquids, destroyed the bacilli in less than 15 minutes, while the spores resisted a 5 per cent. solution for more than seven days, and a 15 per cent. solution for more than 17 hours. The virulence of the spores was neutralised by 5 per cent. solution when in contact with them for 11 days. 12. A 4 per cent. solution of sulphate of iron did not kill the spores in six days, nor did a 20 per cent. solution of sulphate of copper in four days, nor a 4 per cent. solution of sulphate of zinc in 13 days. 13. A 4 per cent. solution of pyrogallic acid left the spores unaltered after six days' contact. 14. Very numerous experiments were made with 1 per cent. and 1 per thousand solutions of corrosive sublimate. Solutions of 2 per cent. killed the spores of bacillus anthracis in less than 20 minutes. Solutions of 4 per thousand killed them in under 35 minutes, and 1 per thousand in about one hour; 2 per thousand in two hours; 1 to 5,000 did not kill them after 10 days' exposure; 1 to 6,000 required 80 to 90 days, and 1 to 10,000 did not kill them after 9 months. 15. Glycerine destroyed the virulence of the bacilli after some days, but the spores resisted more than 14 months, and perhaps indefinitely. 16. Solutions of potash and ammonia and picric acid, even when concentrated, required many days to affect the spores. 17. Bichloride of quinine and glacial acetic acid killed the bacilli in a few minutes, but the spores resisted acetic acid for 87 or more days. 18. Absolute and commercial alcohol killed the bacilli in less than 5 minutes, but the spores after 120 immersions in absolute alcohol were still virulent. 19. Essence of cloves did not kill the spores even after 20 days' immersion, nor sulphide of carbon after 49 days. 20. A saturated solution of chloride of zinc killed the bacilli in a few minutes, but the spores resisted more than 6 days. 21. Sulphites of soda and magnesia and 'pellagrozein' (the poisonous principle of heated maize, which is supposed to cause pellagra by Prof. Lombroso) were not efficacious. Prof. Perroncito finally recommends fresh chlorine water or super-heated steam as the best disinfectants for anthrax.

G. D'Arcy Adams, M.D.

Article 3427.

VOISIN ON HYPNOTISING THE INSANE.

At a meeting of the Medico-Psychological Society of Paris, held on June 30, 1884, and reported in the *Annales Médico-Psychologiques*, September 1884, Dr. Auguste Voisin read a paper compiled by his interne, M. Gomet, recording some of his experiments on hypnotising persons of unsound mind. The subject was a woman apparently from Alsace, named Jane X——, about 22 years of age. She had been arrested in Paris for ordering goods on false pretences, and, being recognised as insane, had been put under the care of Dr. Voisin. She was at first violent and foul in her language, using such expressions as 'I want to see the Italians, my husbands. I have forty of them.' After being about a month under treatment she was mesmerised, not without difficulty, and her confessions taken down on the spot. They are published in their original freedom, and, as she had led a dissolute life, are of a piquant character. At the earliest age of puberty she had been enticed from her home by two Prussian officers, who dressed her like a non-commissioned officer and kept her by them. They were found out, and condemned to three years' imprisonment. She herself was sent to a house of correction till she was 21 years of age, but, as she behaved well and worked in the house of the director of the establishment, and put her person at his disposal, she was set at liberty at the age of 19. Her other incontinences, thefts, and frauds, given under several hypnotised sittings, are related with more than the frankness of the confessional. These revelations occupy eight pages of the *Annales*. We have only room for the conclusions, which Dr. Voisin presents as follows.

1. The hypnotic sleep was brought on by various means, by my clinical clerk and by myself, by causing the patient to fix her eyes on ours, or on some object placed between the eyes, by placing the hand on the closed eyes, or by the action of a magnesium lamp on the eyes, which must be kept open. Sometimes it was necessary to follow for a long time the wandering eyes of the patient. Repeated practice every two or three days made the production of the sleep much easier.

2. The hypnotic sleep was preceded by sensations of giddiness, heaviness of the eyelids, and nausea.

3. Several times there were also shiverings and tremblings; but these symptoms only appear when the sleep is long in being produced. I have noticed, in the early stages, agitation, with incoherency of speech and gross and indecent personalities. This state appears to me to be analogous to the excitement and talkativeness which sometimes precede sleep produced by chloroform.

4. The hypnotic sleep is excessively calm. The anæsthesia and repose are complete. The patient sleeps in her clothes, from twenty-two to twenty-three hours. She moves and turns herself in bed, and speaks from time to time without anyone addressing her; she pronounces the names of servants whom she hears talking. Her awaking does not resemble that of a person coming out of a natural slumber. She sits up suddenly, does not yawn nor stretch herself, and rises from bed to go out of the room. At first this woman regained her habitual expression from five to ten minutes after awaking.

5. I could suggest different acts to her during her sleep, which she was to do on waking, or a certain number of hours and days after. Thus it was suggested to her to take a concealed bottle of wine which was intended for her, to count up to ten, to carry something to a companion, to write a letter, to wash out a parlour. I also told her to be amiable and affectionate to one of her sisters for whom she had repeatedly manifested a great aversion, accompanied by threats, and the result was obtained. I told her to behave in future like her sisters, and to promise me in writing to do so. She did so, and during a recent visit from one of her sisters she was

repentant and affectionate. Her behaviour is much improved. She could not be persuaded to sew like the quieter patients. I suggested the idea to her every day while she slept, only allowing her to sleep for an hour, and now she sews every day for two hours. I suggested to her to learn some chapters of a moral book, and to recite them to me before the students who attend my class. She did so, and recited two or three pages. (It is worthy of notice that while waking she refused all I asked her; and while sleeping, some minutes later, she promised to obey me, and she obeys the suggestion when awake.)

6. I told this patient during every sleep not to awake until a given hour; she did this, and, in spite of some protestation, especially at first, I found very little resistance. She awoke, either when the hour which I had mentioned to her struck, or some minutes later. I have repeated these experiments in different ways.

7. I was of opinion that this sleep, frequently imposed on deranged persons, could reduce them to a quieter state, an idea which observation seems to confirm. This patient's agitation gradually lessened, and the disorder of her speech and conduct diminished to a marked extent.

8. The contrast which exists between the incoherency of her acts and words, while she is awake, and the good behaviour and reasonableness of her answers, during her sleep, appear to me to be a very interesting subject for meditation. It was found impossible to obtain any information from her in her waking state about her native place, her relations, or of her former life; but when she was in the hypnotic sleep I easily obtained the most minute details. She then gave me a circumstantial account of her previous life from her infancy, of her numerous criminal acts, and of her condemnations; she told me of acts which led to her arrest, objects which she stole, the numbers of shops to which she went, the police-office to which she was taken, the names and residences of individuals who were her accomplices.

9. Is there not matter for reflection in the fact that, without admonition from me, while she is in the hypnotic sleep, she regrets her misconduct, and when she is in a waking state she only speaks of rejoining her companions, of amusing herself, and of drinking? Good and honest sentiments gain ascendency during sleep; it may be said that the patient changes her character.

10. I ask, is it not possible to make suggestions to patients who are easy to hypnotise, so as to calm them, to diminish the psycho-sensory excitement, and to give a determined moral and intellectual direction to their thoughts? I shall continue these researches, and communicate the results to the society. W. W. Ireland, M.D.

Article 3428.

CORNILLON ON DIABETIC NEURALGIA.

Cornillon (*Revue de Méd.*, Paris, March 1884), after passing in review the writings of Dreyfous, Worms, Drasche, and others on the subject, relates two new cases of his own, in which cervico-brachial neuralgia, first on the left and then on the right side, and symmetrical sciatica, were evidently owing to the saccharine condition of the blood. Such cases are, on the whole, rare, as until now only twenty-two are on record. On analysing these, it is found that glycæmic neuralgia is not generally an initial symptom of diabetes, but occurs rather when this condition is confirmed, and when there are much loss of power, emaciation, and polydipsia. It comes on quite suddenly; the patient goes to bed apparently as well as usual, and is suddenly wakened up by a fearful attack of pain which drives him out of bed; or the pain comes on on waking in the morning, after a somewhat restless night. It is continuous, terebrating, or lancinating, or lightning-like, and there are occasional paroxysms which exceed in keenness and duration the most violent exacerbations of other forms of neuralgia. These attacks occur three or four times a day, after meals, and again on going to bed. The pain is so violent that one of Worms's patients threatened to commit suicide; one of Drasche's ran about in his room yelling and screaming. The nocturnal attacks appear to be worse than those which occur in the daytime. One of Cornillon's patients did not go to bed for several months, from fear of the heat of the bed bringing on a bad attack. The pain is sometimes localised in the course of certain nerves; at other times it will also affect the muscles and bones. Digital pressure on the course of the nerve increases it, while compression all the way round rather relieves it. There is generally no fever, the skin is cool, the pulse normal; Buzzard, however, has seen a slight elevation of temperature, which is quite exceptional. If the pain continue for any length of time, there are loss of sleep and appetite, and great depression of spirits; but on the disappearance of the pain the patients recover themselves rapidly.

One of the most striking features of diabetic neuralgia is its symmetry. This was seen in eighteen cases out of twenty-two. It is, however, rarely at once symmetrical; more frequently one limb is first affected, and its fellow only follows suit a few days afterwards. The same nerve-fibres are then affected, the distribution being quite regular. The pain, however, is generally worse in one limb than in the other; and mostly so in the one that was first affected. In Drasche's case it was bi-hemiplegic, in this way, that it was first perceived in the right leg, then proceeded to the arm, forearm, and fingers of the same side; after a time the lower and then the upper limb of the opposite side was affected; and in one of Cornillon's cases it alternated so that at first the left cervico-brachial plexus suffered, and some months afterwards the same plexus on the other side. The quantity of sugar in the urine was in most cases large when the neuralgia appeared; in a few, however, only minimal. In general an antidiabetic treatment, by alkalies and diet, rapidly relieved the suffering, and the improvement went *pari passu* with the diminution of sugar. The attacks occurred then more rarely, and were less severe; but if the patient broke the regimen, the pain would return in its old intensity.

The prognosis is, therefore, rather favourable, if the true nature of the disease be recognised; but if it be not properly understood, the muscles will gradually waste away, and anæsthesia of the skin sets in, which proves intractable.

The diagnosis does not present any great difficulties. It should, however, be recollected that not every neuralgia which occurs in the course of diabetes is of glycæmic origin. Where it is independent of the glycosuria, it may be owing to carious teeth, when it affects the dental nerves; or to cold, fatigue, &c., and then selects those parts which have been principally exposed. Such neuralgia

is generally unilateral, the attacks being of medium or even slight intensity; and the pain generally yields in a few days to ordinary treatment. On the contrary, where glycosuria is the cause, the neuralgia appears suddenly and without any appreciable exciting cause; there are three or four long attacks during the day, and the pain is intolerable; it is mostly symmetrical, and invades more particularly the sciatic plexus. It resists the ordinary treatment by morphia, salicylate of soda, and yields to anti-diabetic treatment only. Saturnine neuralgia is also symmetrical; but it has a different history, and the urine does not contain any sugar.

Rosenstein considers the diabetic neuralgia, as well as the glycosuria, to be owing to venous congestion in the abdominal organs; but this theory is unacceptable, as then sciatica would be much more common than it really is, and it would also habitually occur in persons suffering from piles, chronic nephritis, tumour of the spleen, congestion of the liver, &c.; such, however, is not by any means the case. Moreover, diabetic neuralgia occasionally affects the brachial plexus, the intercostal nerves, and the fifth pair. Worms, on the other hand, considers the excessively saccharine state of the blood to be the cause, whereby he thinks that an anatomical or dynamic modification of the nerves is produced, just as in gout and lead-poisoning. This explanation is accepted by Drasche and Peter; but it is refuted by the circumstance that in some cases there is only a minimal amount of sugar in the urine, and the preceding symptoms of diabetes, such as polydipsia, emaciation, loss of power, &c., have been only slight. Cornillon is of opinion that diabetic neuralgia is owing rather to the presence of uric acid in the blood, since most patients have had gouty or rheumatic antecedents, and sciatica is a somewhat common symptom of gout. As for any pathological lesion in the nervous system, it is evident that we have not to do with neuritis; for there is no pyrexia, no vesicular or pemphigoid eruption, no paralysis; on the other hand, the fact that this form of neuralgia is very obstinate and affects homologous nerves, tends to show that there must be a temporary, although not extensive, lesion in the spinal cord. In what part of the spinal centre it may be situated, whether in the membranes near the posterior columns, or in the white or grey matter of the cord itself, it would be premature to say, as no necropsy has as yet been made. Julius Althaus, M.D.

Article 3429.

TUMAS ON THE PHARMACOLOGICAL ACTION OF HYDROBROMATE OF QUININE.

Professor S. P. Botkin had for many years successfully used hydrobromate of quinine, not only as an antipyretic, but also as a sedative remedy in various diseases, such as headache depending on disturbances of the vaso-motor nervous system, giddiness from various central and peripheral causes, neuralgia (chiefly of malarial origin), typhoid and typhus fevers with sleeplessness, delirium, and subsultus tendinum, angina pectoris in hysterical subjects, urticaria, &c. The physiological action of the drug being still insufficiently studied, Professor Botkin recommended the subject to Dr. L. Tumas, who accordingly accepted it for his inaugural work (Botkin's *Arkhiv Kliniky Vnutrennykh Boleznei*, 1883, Vol. viii., pp. 447–644). The author conducted his experiments (on frogs, dogs, and rabbits) partly at Botkin's laboratory, partly at the physiological laboratory of Professor J. R. Tarkhanoff, and arrived at the following results. 1. Hydrobromate of quinine markedly arrests alcoholic fermentation as well as putrefaction of blood. 2. Subcutaneous or intravenous injection of small (2½ milligrammes to 1 centigramme per kilogramme of the animal's weight), middle (1 centigramme to 25 milligrammes per kilogramme) and large (3 to 5 centigrammes per kilogramme) doses is immediately followed by a decrease of the arterial tension, the fall being of various degree and duration according to the dose used. 3. Under small and moderate doses the pulse increases in frequency, but soon returns to the standard; with large doses, it is retarded from the beginning, the retardation lasting for a prolonged period. 4. The fall of the blood-pressure is dependent upon paresis of the vaso-constricting, and stimulation of the vaso-dilating, nerve-apparatus. 5. Muriate of quinine brings about similar phenomena, but the hydrobromate acts more strongly and for a longer time than the muriate. 6. In moderate doses, hydrobromate of quinine at first slightly increases the frequency of the respiratory movements, but very soon there appears a marked decrease in the number of the latter, and in the degree of the respiratory excursions. Repeated injections of a moderate dose, or the administration of a large dose, diminish the frequency of respiration and the degree of respiratory excursions, and finally arrest respiration in the stage of expiration. 7. Hydrobromate of quinine, whatever the mode of its introduction may be, very strongly depresses the excitability of the psycho-motor centres. The period between the stimulation of the psycho-motor centres, and the contraction of corresponding muscles, becomes twice or three times longer than in the normal conditions. To bring about epileptoid convulsions after an injection of hydrobromate, a stronger electric current is required than before the injection. 8. To produce a certain fall of the blood-pressure in an animal with 'sthenic' fever, a far larger dose of hydrobromate is required than to bring about an equal fall in a healthy animal. On the contrary, in cases of 'adynamic' fever, the blood-pressure falls from considerably smaller doses than in a normal animal. 9. Chronic poisoning by hydrobromate of quinine, produced in puppies by means of daily subcutaneous injections of moderate doses for a month, is manifested by loss in weight of the animal's body, general sluggishness, permanent slight decrease of the temperature, diminution of pathic and electric sensibility, and decrease of excitability of the psycho-motor centres.

V. Idelson, M.D.

Article 3430.

NIKANOROFF ON THE PHARMACOLOGICAL ACTION OF LITHIUM.

Following a suggestion by Professor S. P. Botkin, Dr. N. Nikanoroff (Botkin's *Arkhiv Kliniky Vnutrennykh Boleznei*, 1883, Vol. viii., pp. 1–102) studied the physiological action of salts of lithium, one of the objects being to determine the pharmacological place of lithium in relation to potassium and sodium; that is, to decide to which of the two lithium stands nearer in its action on the animal system. The experiments were made mainly with

chloride of lithium, and then with acetate and sulphate of lithium; the first-named salt having been selected on account of its solubility (70 parts in 100 of water) and fitness for spectroscopic examination. For one series of experiments frogs were used; for another, dogs. The results obtained in the first series are strikingly different from those in the second.

1. *Experiments on Frogs.*—Chloride of lithium, like chloride of potassium, essentially disturbs the systole of the cardiac ventricle, and produces diastolic arrest. However, the regularity of cardiac rhythm and of contractions of various parts of the heart continue for a much longer period than in the case of chloride of potassium. The heart arrested by lithium continues for a long period to answer mechanic and electric stimulation. Division of the vagi and separation of the spinal cord from the brain, with atropinisation, do not influence in any way the action of lithium upon the heart. The blood-pressure falls parallel with the development of cardiac weakness. Being brought into direct contact with blood-vessels, a 0·5 per cent. or 1 per cent. solution of chloride of lithium produces dilatation of the vessels, even when the vaso-motor centre is destroyed. Lithium probably affects the intracardiac motor nerves. Reflex action is decreased by lithium, which phenomenon probably depends upon the action on the spinal cord.

2. *Experiments on Dogs.*—Lithium salts differ extremely from potassium salts in their action on the heart. The cardiac action is but slightly changed, even when chloride of lithium is introduced directly into the blood in comparatively enormous doses. Two-gramme doses produce a rise of the arterial tension; three-gramme doses, as a rule (but not always) retard the heart. Intravenous injection of chloride of lithium (in the dose of 0·1 gramme per 1 kilogramme of the animal's weight) brings about a diuretic effect, while the urine acquires an alkaline reaction and a low density. Each successive administration of lithium gives the same result; and when not less than four grammes of the salt are administered, there appear albuminuria and hæmoglobinuria. [That is, lithium salts come near to sodium salts, which deprive red blood-corpuscles of their hæmoglobine, as Botkin showed in Virchow's *Archiv*, Vol. xx., p. 25.] When mixed with a 30 per cent. solution of chloride of lithium, blood at first becomes bright red, then dark cherry-red; and blood-corpuscles slowly disappear in consequence of their dissolution. The increased secretion of urine does not go parallel with the rise of the arterial tension; 0·5 grammes produce diuresis, but leave the blood-pressure unaltered. Chloride of lithium possesses a stronger diuretic property than the acetate. When introduced into the stomach, lithium salts are eliminated by the urine within three days, the amount of uric acid remaining unchanged. V. Idelson, M.D.

Article 3431.

D'Espine on the Accumulation of Potassium Salts in the Blood during Attacks of Eclampsia.

In the *Revue de Médecine* for September, M. D'Espine, after reviewing the various theories as to the cause of convulsions in renal inadequacy, refers to the experiments of Feltz and Ritter as having demonstrated that the retention of urea in the blood does not give rise to any of the so-called uræmic accidents; and that, after having exonerated also the other incriminated products, viz., carbonate of ammonia, extractive matters, and the like, they establish the fact that, among the urinary constituents retained in the blood, the only ones concerned in the production of the well-known toxic effects are the salts of potassium. M. D'Espine proposes to seek the verification by clinical evidence of this hypothesis, based at present upon physiological experiments, and the paper before us is the first instalment of this inquiry.

Two cases are recorded, one of scarlatinal and one of puerperal eclampsia, which were selected as having the common characters of abrupt commencement, grave symptoms, and immediate relief consequent upon free venesection (200 grammes). In both cases the analysis of the blood and the urine furnished by MM. Frütiger and Jaccard, of the University of Geneva, presents an accumulation of potash in the serum, and in one case its almost complete disappearance from the urine during the attack.

The method of analysis adopted was as follows:

A. *Blood.*—The blood having been at rest in a cool place until the serum is entirely expelled from the clot, the liquid is drained off. These two constituents are then separately weighed, and the weighed specimens tested separately for *urea*. The serum is treated with thrice its volume of alcohol, filtered, and the precipitate exhausted in alcohol. The clot is washed in strong alcohol, and all the alcoholic liquids are mixed and evaporated to dryness. The residue is taken up by water, and after precipitation with tribasic acetate of lead, filtered. The excess of the lead salt is precipitated by carbonate of soda, and again filtered; and, finally, the urea is determined by Liebig's method in the purified liquid. To determine the *potash* salts, two weighed specimens of clot and serum are heated to dryness in a sand-bath and calcined. The ashes are treated with hydrochloric acid, and the solution filtered to eliminate any incompletely burnt carbon. The iron and albumen are next precipitated by ammonia, and the precipitate separated by filtration. The liquid is evaporated to dryness, and the residue calcined to disperse the ammonia, and then treated with acidulated water. After filtration the potash salts are then determined by the chloride of platinum method, with the ordinary precautions.

B. *Urine.*—To estimate the urea, exactly 50 cubic centimètres are boiled (to precipitate the albumen), filtered, and water added to make up the 50 cubic centimètres. Fifty cubic centimètres are then added of a mixture of nitrate and hydrated oxide of barium, the resulting phosphate of barium separated by filtration, and deducting 20 cubic centimètres of the filtrate, the urea in this quantity (corresponding to 10 centilitres of urine) is estimated by Liebig's method, and the chlorides subsequently determined to make the necessary corrections. The estimation of the potash salts is done in the manner mentioned above for blood, with a known volume of urine evaporated and calcined. For albumen, 50 cubic centilitres of urine acidulated with acetic acid are evaporated to dryness; the residue, kept acidulated by acetic acid, is filtered upon a filter-paper, dried at 105°, and weighed. The precipitate is then exhausted in alcohol, and the filter-paper and its contents again heated to 105°, and weighed when cool. As a small quantity of albumen always re-

mains attached to the walls of the evaporating capsule, it too is dried at 105° and weighed. The two are then added; but as the result contains ashes, which it is necessary to deduct, the filter-paper is calcined in the capsule, and the weight of the ashes thus obtained deducted from the weight of the albumen previously ascertained. When the quantity of urine is small, the potash salts are estimated on the same specimen as the albumen by adding the acetic and alcoholic liquids to the ashes of the albumen and proceeding as described above for potash.

The result of these methods in the two cases above mentioned shows that the potash salts in the blood serum were almost double the normal quantity, while remaining at a fair average in the clot. From this it may be concluded that there is an arrest of elimination without destruction of the blood corpuscles, which may possibly represent a more advanced stage. Indeed, hæmoglobinuria has been observed in the course of poisoning by chlorate of potash. In conclusion, it is stated that 'the experiments of Feltz and Ritter gain some support from the *potassæmia* demonstrated in man during two cases of "uræmic" attacks. It is known that the passage of potash salts with the blood into the heart greatly raises the arterial tension; it appears proved that this action is exercised directly by the dissolved salts upon the endocardium, and intermediately upon the cardiac nerves. The bleeding acts probably in a complex fashion, both by diminishing the surplus of the toxic agent, whose slow accumulation is necessary to determine the convulsions, and also by abruptly lowering arterial tension.' KENNETH MILLICAN.

ARTICLE 3432.

VALENZUELA ON INHALATIONS OF NITROGEN: THEIR PHYSIOLOGICAL AND THERAPEUTIC ACTION.

TEN persons (*El Siglo Médico*, Oct. 19, 1884) were made to inhale twice a day for an hour, for fifteen days, a mixture of air with half its volume of nitrogen, no change being made in their ordinary regimen. At the beginning of the inhalation, the respiratory movements increased in amplitude and frequency; the pulse became more frequent, hard and full; there was a sensation of heat of the face and extremities, and slight sweating; the veins became more perceptible, the skin and mucous membrane deepened in colour, and the thermometer showed an elevation of temperature from two to four-tenths of a degree—symptoms of a general stimulant action. But in from five to twelve minutes all this was reversed; the respiratory movements became less frequent and more shallow than normal, the sensation of want of air diminished, the pulse first recovered its normal rhythm and then became slower, the skin and mucous membrane became pale, and the temperature began at fifteen minutes to fall, and continued to do so until the end of the inhalation, when the fall amounted to above 4° Fahr. below the normal. In the most well-marked cases the respiratory movements were not more than eight in the minute and the pulse fifty. After the inhalation the respiration was slow and tranquil, the pulse small, and the temperature did not regain the normal for several hours. In the nervous system there was always a diminution of reflex excitability, of sensibility, and of activity in voluntary movements, and somnolency or complete physiological sleep. The analysis of the expired air and urine showed a diminution of the oxygen consumed during and after the inhalation of from 10 to 25 per cent., of the carbonic acid eliminated from 8 to 15 per cent., and of the urea excreted in the twenty-four hours from 12 to 30 per cent. The uric acid was not affected, the digestive functions experienced no alteration, but interstitial nutrition increased considerably, as was shown by the increase of weight, which varied from 300 to 1,500 grammes.

The contrast between the early and late symptoms induced the author to undertake two other series of experiments. In the first, five persons were made to inhale for five minutes four times a day for fifteen days: in these, the effects of general excitement were manifested alone, the temperature rose, the appetite increased, as did the cerebral and muscular activity. In the second series, five persons were subjected to two daily inhalations as in the original experiments, with the difference that, instead of beginning with a nitrogenised atmosphere, the proportion of nitrogen was gradually increased. In these, the phenomena of excitement did not occur, and the symptoms of diminution of vital activity began at once. The author's interpretation of these facts is that the organism, under the sudden change in its vital conditions, puts in action its powers of reaction to compensate the diminution of its proper excitant, and hence the first phenomena of excitement, which are possible from the oxygen always held in reserve. Afterwards it adapts itself to the altered circumstances; and, the supply of oxygen being deficient, there is less combustion, and hence less force liberated. Nitrogenised air, owing to the absence of oxygen, has, as P. Bert has shown, the same effects as rarefied air. With this in the same manner there are two distinct stages of its action, vital stimulant in the time of transition, and vital moderator in prolonged action. The author has employed inhalations of nitrogen chiefly in phthisis, and says that the result of treatment is constantly suspension of the progress of the disease and relative cure. Within a more or less short time, fever disappears with the night-sweats and thoracic pains; the cough, expectoration, and dyspnœa diminish, and the appetite and digestion improve, and the patient begins to gain weight. In all irritative diseases of the respiratory apparatus, catarrh, pneumonia and pleurisy, the antiphlogistic action of nitrogenised air is useful. Nervous or essential asthma, and asthma symptomatic of heart or lung lesion, is also relieved by the same treatment; during the access no remedy, except perhaps hypodermic injection of morphia, gives such relief. The author has observed that the inhalation of oxygen increases the dyspnœa when depending on pulmonary emphysema, catarrh, and tuberculosis, and aggravates the disease, but relieves it when depending on cardiac lesions. He considers the inhalation of nitrogen the most powerful apyretic that we possess.

G. D'ARCY ADAMS, M.D.

DEATHS.—The following deaths have been recently announced:—Dr. von Wittich, lately professor of physiology in the University of Königsburg; Dr Karl Vierordt, lately professor of physiology in the University of Tübingen; and Dr. F. Chvostek, of Vienna, well known for his researches in electro-therapeutics.

Article 3433.

RACHEL ON DYSTOCIA FROM COILING OF THE UMBILICAL CORD ABOUT THE NECK OF THE FŒTUS.

Dr. Rachel, in the September number of the American *Journal of Obstetrics*, details five cases of this complication occurring in his own practice, and gives some reflections upon its occurrence and treatment. He cites a report on the subject made to the Obstetric Society of Edinburgh, January 1883, giving the means for diagnosis as follows: 1, Retraction of the fœtal head during the pains, with sufficient uterine action and a roomy pelvis; 2, gradual cessation or long abeyance of the pains; 3, insufficient head-flexion, followed by over-rotation of the occiput; all pointed to coiling of the cord round the child's neck. The second factor above stated he believed to the most important. For diagnosis of this condition when the head was in the pelvis, he held that it could be made out by digital examination when the pelvis was roomy. If he suspected its occurrence in the first stage, he would employ sedatives; in the second stage, he would hasten the labour in the usual way, or cut the cord with a pair of probe-pointed scissors, and then employ forceps.

The writer joins issue with the statement of the first point; it should be just the reverse, for the sentence as it stands applies to the normal conditions of labour, the head in normal labour, it is almost superfluous to mention, being retracted somewhat during a pain, while it descends on its cessation by the force of gravity. This advance of the child during the pain and retraction when the pain ceased was noticeable in every one of Dr. Rachel's five cases, and is in accord with Cazeaux's observations.

Regarding the degree of embarrassment from a coiled cord, Dr. Rachel says that his measurements of the circumference of the neck in every child he has delivered for the past year give as the lowest figure six inches and the highest a little over eight inches. He at the same time measured the distance from the umbilicus to the side of the neck, and found that it averages seven inches and a half, the lowest figure being six and a half and the highest a little over eight and a half inches. Taking the lowest figures found, a threefold circle—which in reality requires, in face-presentations, only two and a half circumferences—would give—Coils of cord, 15 inches; length from umbilicus to side of neck, $6\frac{1}{2}$ inches; together, $21\frac{1}{2}$ inches.

The remaining portion of the cord from the neck to the placenta is not taken into account; and, be it ever so short, it would still add several inches to the calculated figure. He thinks that even the tightest constriction around the neck, coupled with the strongest traction short of rupture of the cord, would be unable to reduce the number of inches by one half, that is, to eleven inches. In one of the writer's cases he gives the following figures:—

From umbilicus to neck	8 inches.
Two full coils	15 ,,
Together	23 ,,

which leaves for the length of cord from neck to placenta: $29\frac{1}{2} - 23 = 6\frac{1}{2}$ inches. This would about correspond to the distance from the vulva to the placenta, which was situated anteriorly to the left of the median line.

In another case the figures were:

From umbilicus to neck	$6\frac{1}{2}$ inches.
One full circle	6 ,,
Together	$12\frac{1}{2}$,,

which would leave for the length of cord from neck to placenta: $16\frac{3}{4} - 12\frac{1}{2} = 4\frac{1}{4}$ inches.

The shortest cord ever measured (Cazeaux) was two inches long, and it was torn just before the expulsion of the child; but, of course, in this case the cord went directly from the umbilicus to the placenta. The shortest cord measured by the writer was 10 inches, and, there being no coil about the neck, it gave little convenience during labour.

The writer's conclusions are summarised as follows.

Diagnosis.—1. Descent of the head during the pains and retraction during the intervals. 2. Insufficient head flexion and over-rotation of the occiput. 3. Variability of the position of the head within narrow limits. 4. Distressing pain at the seat of the placenta. 5. Discharge of some blood immediately after each pain. If rigid perinæum, dorsal displacement of an arm, or head-and-arm presentation can be excluded, the first symptom, especially when combined with some or all of the others given, points to true or accidental shortening of the cord.

Treatment.—1. Anæsthetisation of the patient. 2. Extraction of the head by the forceps and division of the cord to allow the delivery of the body. Or, in extreme cases, 3. Division of the cord within the vagina, followed by the application of the forceps. The early division of the cord may be urgently required to save the life of the child, as is illustrated by Dr. Lusk's case, and by a case cited by Cazeaux, where it was delayed two hours after the birth of the head. It also militates against two other formidable accidents, namely, inversion of the uterus and flooding.

Article 3434.

MÜLLER, WEISSENSTEIN, AND CHAPUT ON SECONDARY NERVE-SUTURE.

The experiments of Vulpian, Batowetzki, Philippeaux, and Brown-Séquard on the lower animals have conclusively demonstrated that primary suture of divided nerves hastens their reunion, regeneration, and return of function; and these results have been confirmed in the human subject in the forty-five cases that have been recorded, at least two-thirds being successes, the reports in the remainder being incomplete, either because the cases were lost sight of, or because they were published too soon after the operation.

Up to a comparatively recent period, not a few surgeons declared that secondary suture should not be resorted to; but, writes the *Philadelphia Medical News*, during the present year papers from the pens of Müller, Weissenstein, and Chaput, which may be found respectively in the *Deutsche Zeitschrift für Chirurgie*, Band xx., Heft 3 and 4, Bruns's *Mittheilungen aus der chirurgischen Klinik zu Tübingen*, Heft 2, and the *Archives Générales de Médecine* for August and September, show that the operation

yields even slightly better results than immediate suture. Among the more remarkable cases of complete restoration of the physiological functions of the nerve may be mentioned those of Busch, Holmes, and Esmarch, after union of the radial at three, five, and sixteen months; those of Hulke and Jessop of the ulnar after four months and nine years; those of Kraussold, Tillaux, and Langenbeck of the median after two, four, and eight months, and another of Tillaux's after fourteen years; and, finally, that of Simon of the median and ulnar nerves after ten months. In the majority of these cases the sensibility was speedily restored, but the period required for the restoration of the motor function was much longer, the earliest being sixteen days, and the longest three years, the average being from nine months to one year.

Of the thirty-three cases collated by Weissenstein, twenty were complete successes, in four sensibility alone was restored, in six the improvement was very slight or not noticeable, while in three the reports were very imperfect. Hence a complete cure was attained in 60 per cent. of the cases, a result which closely corresponds with that derived by Chaput from an analysis of twenty-seven cases.

The interval between the operation and the return of sensibility averages from two to four weeks. In one case the restoration occurred in sixteen hours, while in four it occurred prior to the fourth day. The restoration of mobility, on the other hand, is much retarded in consequence of atrophy of the paralysed muscles. In a case recorded by Langenbeck of suture of the radial nerve, about three months after its division, motion was apparent on the fifth day, and the function was completely restored on the twentieth day. In a similar injury, recorded by Müller, however, two years and a half elapsed before active movements were perfect, and the rule may be accepted that a year will be required to restore the atrophied muscles to their normal condition.

The rapid return of sensibility, and less frequently and to a less extent of motion, has led Chaput to hold with Schiff, Gluck, Batowetzki, Felkenheim, Paget, and Tillmanns, that a divided nerve may unite primarily without degeneration of its peripheral end, a doctrine which is opposed by Nicaise, Mitchell, Letiévant, Brown-Séquard, and the great majority of observers. Indeed, the weight of authority appears to sustain the view that Wallerian degeneration of the distal extremity must ensue before new elements can be produced. The explanation of the seven so-called immediate unions, after secondary suture, adduced by Chaput to sustain the former theory, has been given by Arloing and Tripier, who, according to Brown-Séquard, 'proved that the various nerves send to each other recurring ensiform or loop-like fibres, which, coming by one of them from an anterior spinal root, goes into another, to ascend to the spinal cord through a posterior root, producing, when acted upon in one nerve, an impression which follows the loop, and then ascends to the cord through the other, giving rise to the so-called "recurring" sensation, so well studied by Magendie and Bernard.' In other words, the rapid return of sensation is not due to immediate union of the divided nerve, but to a supplementary function of intact neighbouring sensory nerves.

The operation has never been followed by tetanus or by death, and only occasionally by neuritis. Hence it would appear that secondary suture of the nerves, however long the time which has elapsed since their injury, is as much indicated as is primary suture, since it yields as good results as does the latter procedure. Catgut is the best material for the purpose, and, although Weissenstein recommends the indirect or paraneurotic suture, which penetrates the sheath alone, we are inclined to believe, with Chaput, that the direct stitch is the more secure and favours more rapid union. Be this as it may, the induced current and massage must be methodically and perseveringly employed during the after-treatment, with a view to restore the functions of the atrophied muscles.

Article 3435.

TWO CASES OF ACTINOMYCOSIS IN MAN.

Attention has been drawn several times in these columns, editorially and otherwise, to a fungoid disease common to various animals—especially cattle—and man, to which the Germans have given the name of actinomycosis. In an editorial, Sept. 11 last, the *Boston Medical and Surgical Journal* stated that the disease, although occasionally observed in cattle, had not, so far as was known, been found in man in America.

The editor now learns from Chicago that Dr. J. B. Murphy of that city has recently operated on two cases of human actinomycosis. One patient was a woman about thirty years of age, who had suffered for a number of months with a hard swelling at the angle of the jaw. The swelling had begun to extend down upon the neck. It was slightly tender, evinced slight fluctuation at one point, and was only to a limited degree movable; it was more or less fixed to the deep tissues. The swelling being opened, a watery puriform fluid, containing minute bright yellow granules of the size of millet-seeds, flowed from it. These were at once suspected to be actinomyces, a suspicion promptly confirmed by the microscope. The patient had a number of decayed teeth opposite the point of the swelling on the jaw.

It was afterwards learned that she had, a few weeks before her visit to Dr. Murphy, lost by death a pet dog, which had died of starvation from inability to swallow, owing to a large swelling connected with its lower jaw.

The operation for the relief of the patient consisted in laying open the swelling freely in all directions and carefully scraping out every particle of tissue that appeared to be abnormal. This and subsequent dressings were done with antiseptic precautions, and the wound healed promptly and completely. The operation seems to have been successful in exterminating the fungus, although too short a time has elapsed to make this positive.

The other patient was a lad, perhaps eighteen years of age, on the right side of whose lower jaw was a swelling of the size of a small walnut. The tumour was opposite a much decayed molar tooth. The patient said the swelling appeared several months before, was quite small at first, and had steadily increased in size. On puncturing the enlargement, the yellow granules of the actinomyces were found. The tumour was then freely opened and scraped out. At the time of the report, the operation had been done only a few days and the wound was not fully healed, but was reported as doing well.

Article 3436.

GUARESCHI, MOSSO, &c., ON PTOMAINES.

In 1880 Selmi described the hydrochloride of a basic body, of an alkaloidal nature, resembling conine. This he considered one of the bodies he had previously described as ptomaines. Marino-Zucco, however, states (*Berichte der Deutschen Chem. Ges.*, 1884) that Selmi's so-called ptomaines are only neurin. Guareschi and Mosso have lately done much, tending greatly to the discredit of the work previously contributed to this subject. They also condemn Dragendorff's method for separating the alkaloids in medico-legal analyses, as this method appears to them really to manufacture alkaloids. Coppola, for example, has found that fresh dog's blood, when extracted by Dragendorff's method, yielded alkaloidal reactions readily. Guareschi and Mosso also find that commercial alcohols are very often so impure as to give alkaloidal reactions; and that the ether, chloroform, and benzine of commerce require purification. All experiments made with them are therefore of little or no value. From 80 lbs. of putrid human brains these observers obtained quantities of ptomaines too small to admit of analysis. They also found that, when doses averaging from one-fifth of a grain to five grains of the ptomaine were subcutaneously injected into frogs, effects were produced similar to those due to curara, the larger doses killing the animals.

The putrefaction of enormous quantities of fibrin furnished a base with alkaloidal reactions, and forming double salts with gold and platinum chlorides. Guareschi and Mosso represent the composition of this base by the formulæ $C_{10}H_{15}N$ and $C_{10}H_{13}N$. This ptomaine acted similarly on frogs and birds to that obtained from putrid human brains. Fresh tissues yielded almost no ptomaines, although from fresh brains and muscles, treated by the Otto-Stas method, small residues could be got giving the general alkaloidal reactions.

Taking into consideration the very large amount, often 100 to 200 lbs., of putrid material that must be operated on to obtain ponderable quantities of a ptomaine, and its comparatively small toxicity, there is little likelihood of a ptomaine being mistaken for a vegetable alkaloid in a medico-legal investigation when the Otto-Stas method is adopted.

T. Cranstoun Charles, M.D.

Article 3437.

MUSSER AND KEEN ON CHOLECYSTOTOMY.

An original communication by Dr. J. H. Musser and Professor W. W. Keen, of Philadelphia (*The American Journal of the Medical Sciences*, Oct. 1884), contains a report of two new cases of cholecystotomy, a table of all the hitherto reported cases, and general remarks. The table has been made to include two classes of cases; those in which the abdominal cavity alone was opened in order to relieve biliary obstruction, and those in which cholecystotomy, properly so called, was done. The purpose of the table is to show the nature of the diseases and the results of treatment, when abdominal section has been systematically performed. The most striking feature of these returns, as Dr. Musser observes, is the wonderfully successful results of operative interference. Of the thirty-five collected cases, only ten were fatal. In most of these fatal cases there were histories of exhaustion from long suffering, and of grave organic disease or toxæmia at the time of operation.

Dr. Musser states that there are four pronounced conditions which are dangerous sequences of biliary obstruction, and which may be looked upon as operative indications. These are jaundice, a tumour in the right hypochondrium, frequently recurring paroxysmal pain, and symptoms of suppuration. Although practically these are the symptoms or sequences of biliary calculus, it is pointed out that they are also symptoms of other forms of obstruction, some of which are removable by operative measures.

Jaundice was present in seven only of the thirty-five tabulated cases. In considering the important question as to how the nature of this symptom may be determined, Dr. Musser says that the varieties of jaundice may be distinguished, in a measure, by a consideration of the age and sex of the patient, the cause and duration of the disease, the intensity of the jaundice, and the presence or absence of itching; more definitely, however, by the occurrence of leucin or tyrosin in the urine and the diminution of urea; still more positively by the study in addition of the anatomical changes in the liver, the biliary passages, and the surrounding organs. If the liver be atrophied, jaundice by suppression is probable; if enlarged, by obstruction. If the gall-bladder be enlarged, the condition is probably due to obstruction. If anatomical changes in the stomach, duodenum, pancreas, &c., be present, the jaundice is in all probability obstructive.

The second indication for cholecystotomy is the presence of a tumour, presumably an enlarged gall-bladder, which is seriously imperilling the life of the patient. This condition was noted in eleven of the tabulated cases. The enlargement may be due to obstruction to the outflow of bile, to the retention of gall-stones, to inflammation of the walls of the bladder, to malignant disease. The presence of an enlarged gall-bladder having been determined, the next question to decide is the nature of the enlargement. This may be due to distension by bile, pus, serum, mucus, or calculi, or carcinoma of the walls of the gall-bladder. Practically, the surgeon has only to decide if carcinoma be present.

The third indication for the performance of cholecystotomy is the occurrence of severe pain in the region of the gall-bladder, due presumably to a gall-bladder. In order to prevent these attacks in persons disposed to the formation of biliary calculi, extirpation of the gall-bladder has been proposed and successfully performed. It is necessary, in cases of this kind, to distinguish the pain caused by gall-stones from the pains of pleurodynia, intercostal neuralgia, gastralgia, renal and intestinal colic. The points of distinction, Dr. Musser asserts, are sufficiently obvious not to need detailing. A decided indication of the presence of stone might be gained by introducing a long needle.

Finally, it is held that cholecystotomy is clearly indicated in cases the symptoms of which are due to internal suppuration. It is necessary to distinguish between suppurative affections of the gall-bladder on the one hand, and multiple hepatic abscess and pylephlebitis on the other. To distinguish the last condition, we have to rely on enlarged spleen and the discovery of foci of inflammation. In suppurative inflammation of the portal vein the tumour

observed in affections of the gall-bladder and in abscess of the liver is usually absent.

In some remarks on the surgery of the subject, Dr. Keen states that the diagnosis by surgical means is made—1, by aspiration with or without exploration by a probe; and 2, by acupuncture. Simple aspiration, it is stated, is not a wholly harmless method, and may cause hæmorrhage and also considerable local peritonitis. The light it throws upon the physical facts, however, is too valuable to be neglected. In most cases in which an aspiration is done, a probe should be passed through the cannula. Stones in the gall-bladder may ordinarily be thus discovered. In Dr. Keen's opinion, acupuncture may throw most valuable light on the diagnosis; but such groping around in the dark among important and vital organs should be done with great care. With regard to further and more extensive surgical interference, it is held that in a certain sense every operation is one of exploration, and that exploratory opening of the abdominal cavity, under antiseptic precautions, may be regarded as one of the safest operations in surgery.

The following are the steps in detail of cholecystotomy, as performed by Dr. Keen. The incision should be made, as a rule, over the centre of the tumour and parallel to the free border of the ribs. It should be about three inches long, so as to be sufficient for exploration, and, if need be, may be enlarged later. The tumour, adjacent abdominal viscera, and especially the cystic duct and common duct, should then be carefully examined by two fingers, or, if necessary, the whole hand. If the gall-bladder be distended with fluid it should now be aspirated, and should next be incised to the extent of an inch, and by the probe and forceps any gall-stones may now be discovered and removed. The last step in the operation consists in the establishment of a biliary fistula by stitching the edges of the opening in the gall-bladder to that in the abdominal wall. This fistula will ordinarily heal within a few weeks. Dr. Keen, alluding to the tendency to hæmorrhage in cases of long-continued jaundice, states that it should make the surgeon careful not to excise any portion of the wall of the gall-bladder. In conclusion, he discusses the propriety of immediate closing of the gall-bladder by sutures, and also of entire removal of this organ after ligation of the cystic duct, and states that he is firmly convinced that in cholecystotomy, as in all other abdominal sections, strict antiseptic methods and precautions should be used.

W. JOHNSON SMITH.

SURGERY.

RECENT PAPERS.

3438. TAYLOR.—Acute Hydronephrosis and Rupture of the Left Kidney successfully treated. (*Lancet*, October, p. 589.)

3439. DAVY.—A Case of Excision of the Left Kidney. (*Brit. Med. Jour.*, October, p. 757.)

3440. REEVES.—The Treatment of Ruptured Kidney. (*Lancet*, October, p. 588.)

3441. BROWNE.—The Treatment of Burns and Scalds. (*Brit. Med. Jour.*, October, p. 710.)

3442. LUCAS. — Prepuce-grafts. (*Lancet*, October, p. 586.)

3443. ANDERSON.—The Cure of Scorpion-stings. (*Brit. Med. Jour.*, October, p. 844.)

3444. OLIVER.—Sanguineous Cyst of the Abdomen. (*Lancet*, October, p. 632.)

3445. THOMPSON.—A Case of Suprapubic Operation. (*Lancet*, October.)

3446. SCHAEFFER.—Earth as a Dressing for Sprains. (*Lancet*, October, p. 668.)

3447. BROWNE.—A Simple Method of Washing out the Bladder. (*Lancet*, October, p. 675.)

3448. HOOD.—Lawn-tennis Leg. (*Lancet*, October, p. 728.)

3449. The Surgical Finger-nail. (*Lancet*, October, p. 750.)

3450. BOUILLY.—Estlander's Operation. (*Société de Chirurgie de Paris.*)

3451. PARKES.—Gunshot-Wounds of the Small Intestines. (*American Medical Association.*)

3452. BURCKHARDT.—The Operative Treatment of Cystic Goître. (*Centralbl. für Chirurgie*, 1884, No. 43.)

3453. TIFFANY.—Deligation of the Common Femoral Artery. (*American Surgical Association.*)

3454. VON WAHL.—The Auscultatory Phenomena in Cases of Arterial Wound and Traumatic Aneurism. (*Deutsche Zeitschr. für Chir.*, Band xxi., Heft 1 and 2.)

ART. 3438. *Taylor on Acute Hydronephrosis and Rupture of the Left Kidney successfully treated.*—In the *Lancet*, Oct. 1884, p. 589, Mr. Taylor records the case of a girl, aged 15, who was suffering from acute hydronephrosis of the left kidney. An operation was decided upon, but before the time fixed for it the cyst burst, and Mr. Taylor immediately opened the abdomen in the middle line, sponged out the urine from the peritoneal cavity, and emptied what was left in the cyst with a trocar and cannula; the opening in the cyst was sewn to the margins of the incision, and a piece of gutta-percha drainage-tube was placed above and another below the opening. After some ten days the urine ceased to flow from the tube, and the cyst began to refill. Another opening was then made, and a glass drainage-tube inserted. The patient from this point steadily improved; but eventually all the urine from the left kidney came through the wound, and the patient remained with an urinary fistula which was a source of great annoyance to her. Every now and then the drainage-tube had to be taken out and cleansed, but otherwise no treatment was required. The author considers that there is nothing now to be done save extirpation of the kidney; but, as the risks of the operation are great, he deems it best to allow the girl to remain as she is, and to put up with the inconvenience of the fistula.

3439. *Davy on a Case of Excision of the Left Kidney.*—In the *Brit. Med. Jour.*, Oct. 1884, p. 757, Mr. Richard Davy reports a case in which he performed excision of the left kidney. The patient was 53 years of age, and recovered from the operation, but died a few days after he was discharged from hospital. The *post mortem* examination showed a large mass of encephaloid cancer around the bladder and rectum. It had ulcerated into the rectum about two inches from the anus, and obstructed the left ureter about five inches up from the ureteric outfall. Exactly at the opening of the left ureter was found an oxalate of lime calculus as large as a hazel-nut, conical at each end, bossed over with many nodules in the centre, superficial, but smooth at each end. When the kidney was excised, no calculus could be felt, though its pelvis was greatly enlarged, and the structure of the kidney was almost completely destroyed. The liver was large, and studded over

with cancerous masses; and the lumbar glands were enlarged from the same cancerous deposit. Mr. Davy looks upon the calculus impacted at the left ureteric outfall as the cause or starting point of the encephaloid cancer, by reason of its definite localisation; and explains the complete freedom from cancerous infiltration above the diaphragm by the anatomical facts that the lumbar glands receive the lymphatics from the ureter, and the liver those from the rectum, through the portal circulation.

3440. *Reeves on the Treatment of Ruptured Kidney.*—In the *Lancet*, October 1884, p. 588, Mr. Reeves reports an interesting case of ruptured kidney, occurring in a lad aged 19, who simply fell from a cart, and received no actual blow to his side. The injury proved fatal in about three weeks. This case suggests the following line of treatment in similar cases. Directly it is found that bleeding is not controllable after trial of every known means, and before the patient is too weakened by hæmorrhage, and also before septic phenomena have been allowed to develop, a lumbar incision should be made over the kidney, and all clots, effused blood, and *débris* removed, and the cavity thoroughly cleansed. Then, if possible, the renal vessels and ureter should be tied and the remnants of the kidney removed; or, better, a drainage-tube should be inserted into the loin, and anterior nephrectomy performed by incising the linea semilunaris. This being completed, the abdomen and pelvis must be cleansed, and the peritoneum on the posterior wall stitched up, to shut off communication with the external opening into the loin. The abdominal wound is then to be closed and bandaged, and external urethrotomy or lateral cystotomy performed, so as to empty the bladder of all clots. The three operations at one time seem a severe remedy, but nothing short will suffice if we wish to obtain a cure in cases of ruptured kidney.

3441. *Browne on Chlorate of Potash in the Treatment of Burns and Scalds.*—Dr. J. Walton Browne, in the *Brit. Med. Jour.*, October 1884, p. 710, recommends the local application of a solution of chlorate of potash in the treatment of burns and scalds. It is especially useful in burns and scalds of the second and third degree, as well as in the severe forms of the fourth and fifth degree, seeming to favour the formation of granulations after the separation of the sloughs. The method adopted is this. In superficial burns the blisters are punctured, and bread and water poultices applied every four hours over all the injured surface until the cuticle has become detached; then pieces of lint soaked in a solution of chlorate of potash, five grains to the ounce, are applied four times a day. Oiled silk is placed over the pieces of lint. To prevent the lint from adhering to the wound, a little glycerine may be added to the solution, or the chlorate of potash may be made into an ointment with lard, of the strength of five grains to the ounce. In the treatment of very deep burns, poultices are applied until all sloughs are separated; then the wounds are dressed with the solution of five grains to the ounce, and a mixture can be given (if the granulations be flabby) of chlorate of potash and tincture of the perchloride of iron, at the same time increasing the strength of the chlorate of potash solution up to ten grains to the ounce. [In 1880, Dr. Harkin spoke of chlorate of potash lotion (five grains to the ounce) as the very best local application for burns.—Vide *Medical Digest*, sect. 60 : 5.—*Rep.*]

3442. *Lucas on Prepuce-grafts.*—Mr. Clement Lucas, in the *Lancet*, October 1884, p. 586, recommends the use of the skin, removed in circumcising children, for supplying grafts to large granulating surfaces, especially those often left after extensive burns. The skin of the prepuce removed from children for phimosis is peculiarly adapted for transplanting, on account of its suppleness, thinness, and vascularity. The time which may elapse between the removal of the skin from the prepuce and its use as grafts to a wound, may safely extend from half an hour to an hour. If the recipient for the grafts live at a distance, the skin may be conveyed in a small glass bottle, or wrapped in gutta percha, without loss of vitality. The author narrates the case of a child, 2½ years of age, who was burnt severely on the abdomen, and after some weeks there still remained a large granulating surface measuring 3½ inches transversely and 1½ inches vertically. Mr. Lucas took the prepuce of an out-patient, whom he had circumcised about half an hour previously, and cut from it about twenty-eight grafts; these were applied to the wound, and in about four weeks the child was quite cured.

3443. *Anderson on the Cure of Scorpion-stings.*—In the *Brit. Med. Jour.*, October 1884, p. 844, Staff-Surgeon I. H. Anderson. R.N., writes that, while staying at Matheran, the hill station of Bombay, he was asked to attend to a servant who had just been stung by a scorpion on the dorsum of the left foot. The author, having seen some correspondence in a local paper, tried two remedies there advised, and which were the only applications available. One was cocoa-nut oil, continually and well rubbed in to the part stung; the other, a strong solution of common salt in water, poured into the ear of the opposite side to the injury. The result was that in about an hour the pain was much better, and next morning the patient was as well as ever. [Singular as this treatment may appear, a reference to section 490 : 5 of the *Medical Digest* shows that, in 1878, alum in the eye of the side wounded was valued by Drs. Beatty and Greany of Bombay in similar cases.—*Rep.*]

3444. *Oliver on a Case of Sanguineous Cyst of the Abdomen.*—In the *Lancet*, October 1884, p. 632, Dr. Oliver records the case of a woman aged 24, a widow, who was admitted into the Newcastle-upon-Tyne Infirmary on account of an abdominal swelling. There was a large quantity of fluid in the abdomen; it was encysted, and entirely confined to the left half of the abdomen. The temperature was 100° F. on admission, and rose the next day to 102° F. It was decided to aspirate, and 148 ounces of blood-red fluid were drawn off. The temperature kept rising for some days after this, and it soon became evident that the fluid was again accumulating. The tumour was again aspirated, and eighty-four ounces of fluid drawn off. Previous to this second operation, the patient suffered from pleurisy of the left side, from which she made a good recovery a few days after the operation. As the effusion disappeared from the left pleura, the fluid in the abdomen re-accumulated, but disappeared again without aspiration. The patient then left the hospital by her own request, but nine days after was re-admitted with severe pain in the abdomen and frequent vomiting. Fly blisters were freely applied to the abdomen, and in a few days the pain had entirely gone, and very shortly afterwards the patient left entirely recovered. The author regards the case as hæmatocele of ovarian

origin, and records it on account of the success which followed a simple line of treatment, viz., aspiration.

3445. *Thompson on a Case of Suprapubic Operation.*—In the *Lancet*, Oct. 1884, Sir Henry Thompson reports a case of suprapubic operation (Petersen's method) for large stone in the bladder. A gentleman, aged 36, consulted the author on June 18, when a large stone was detected, and an attempt made to crush, but without success. After some days, it was decided to perform the suprapubic operation. On July 2 the patient was placed under ether, and the bladder filled with about ten ounces of weak boracic acid solution, whilst the penis was tied firmly with a vulcanised catheter; the rectum was also distended by introducing a pear-shaped India-rubber bag, which was then filled with about twelve ounces of water. A longitudinal incision was made, about three inches long, in the median line, until the yellow fat covering the bladder came into view. This was divided solely with the index finger and forceps; all the tissues covering the bladder were scraped to the upper part of the wound by the right index finger; no vessels were divided during the operation, so that there was no difficulty from hæmorrhage. A well-curved hook was then inserted into the bladder, and its coats incised sufficiently to admit the finger, when the stone was felt and the incision enlarged, so that the calculus could be removed. The ligature on the penis was then untied, and a large vulcanised tube, five inches long, inserted in the bladder to ensure drainage. The patient was laid on his side, and well supported by pillows. Each day his position was changed from one side to the other. The tube was removed on the fifth day. The first urine passed naturally by the penis on the fifteenth day after the operation. The calculus proved to be cystic oxide throughout, and weighed two ounces and three quarters. The author concludes by stating that he has performed the suprapubic operation by the old method, on the staff, and without preliminary injection of the bladder and rectum, but thinks these latter precautions of great value, contributing to the safety of the peritoneum, as well as to the ease with which the stone is extracted.

3446. *Schaeffer on Earth as a Dressing for Sprains.*—Dr. Schaeffer, in the *Lancet*, Oct. 1884, p. 668, writes that he has found that clay dressings are most useful in cases of sprains. A case is recorded of a young lady who fell from a ladder and sprained her ankle severely. No treatment was attempted, and for eight years the patient went about limping, becoming almost an invalid. The author was consulted, and advised the patient to use an ankle brace when walking, the foot at the same time being dressed with clay, adapted to it as a plaster splint would be. Perfect rest to the joint was ensured; in less than six weeks she could walk well, and was restored to an useful outdoor life.

3447. *Browne on a Simple Method of Washing out the Bladder.*—In the *Lancet*, Oct. 1884, p. 675, Mr. Buckston Browne describes a simple method by which a patient can wash out his own bladder. A diagram is given which helps to explain the action of the instrument. A simple bifurcated brass tube, without valve or stopcock, has one end fixed to a Higginson's syringe; the nozzle is fixed at the other end to a catheter in the bladder. The fluid is gently injected into the bladder by squeezing the ball of the syringe, whilst a finger is placed over the open end of the bifurcated tube; when the finger is removed the contents of the bladder escape, or fresh injections can be made into the bladder, and then allowed to flow away at pleasure. By this means a patient is able to wash out his own bladder with ease. The brass nozzle is made by Messrs. Weiss & Son, Strand.

3448. *Hood on 'Lawn-tennis Leg.'*—In the *Lancet*, Oct. 1884, p. 728, Dr. Wharton Hood describes a method which he has adopted with much success in the treatment of what is popularly known as 'lawn-tennis leg.' It is based upon two essential points—(1) adequate support for the structures of the calf, and (2) immediate and uninterrupted use of the limb. As soon as possible after the occurrence of the rupture of the muscles or tendons of the calf, the patient should be placed upon a sofa, with the injured leg raised above the level of his head; and he should be kept in this position for five minutes. This is an important preliminary, because the position alone will be sufficient to empty the limb of superfluous blood, and thus to reduce the swelling which is commonly present. After a sufficient period of elevation, and while the leg is still raised, strips of adhesive plaster, each an inch and a half in width, should be applied, extending from two inches above the ankle to above the thickest part of the calf. As soon as the plaster is applied, the patient should be directed to walk about the room and to place the heel firmly, or at least fully, on the ground at each step. The great thing is not to allow the patient to leave the consulting room until he is convinced that he can walk, or he will fear to try to walk properly, and then the treatment will fail. After three or four days, the plaster must be renewed, and the patient should be compelled to walk further and further each day, until a cure is completed.

3449. *The Surgical Finger-Nail.*—In the *Lancet*, Oct. 1884, p. 750, attention is drawn to an instrument shown by M. Motais at the recent French Congress held at Blois. It consists of a metallic plate, of the shape of the finger-nail, which it covers, the finger itself being engaged by a ring. It is useful in removing glands from the axilla in cases of cancer of the breast, and might be applied to remove uterine polypi, as well as in stripping the periosteum from a bone. Richard Neale, M.D.

3450. *Bouilly on Estlander's Operation.*—In the course of a recent discussion on Estlander's operation at the *Société de Chirurgie* of Paris, M. Bouilly alluded to five cases in which he had applied this treatment, and made the following general remarks. What are the causes, he asks, of the failures that have been recorded, and under what conditions ought Estlander's operation to be applied in order to give such good results as might justly be expected from it? *A priori*, those cases being excluded in which the patient is tuberculous and quite incapable of furnishing any plastic products, failure may be attributed to insufficient resection of the ribs. The thoracic wall falls in at the parts where it has been deprived of bone; but where the rigidity of the wall is still maintained by the presence of ribs, there exists an open sinus, which goes on suppurating. Consequently, with larger cavities, especially those which extend high up under the superior ribs, costal resection will remain insufficient, since the upper region of the thorax is almost inaccessible. The most the surgeon can anticipate is some improvement in the general condition of the patient, in consequence of the reduction in size of the suppurating cavity. In cases of a cavity of medium dimensions

occupying the antero-lateral region of the thorax without reaching very high up, failure may certainly be laid to the account of insufficiency in the extent of rib that has been resected. From these considerations is derived the conclusion that it is necessary, before operating, to obtain exact information of the extent and form of the purulent cavity. With this object in view, it becomes necessary to explore this cavity as we would explore the bladder, by using sounds of different curves. By marking externally on the thorax the dimensions made out by the use of the sound, the surgeon may trace out the extent and form of the affected portion of the pleural cavity. This method, it is held, is much more valuable than those of injection, percussion, and auscultation. The second cause of failure of thoraco-plasty, M. Bouilly asserts, consists in the structural changes of the pleura. This membrane may not only be invaded by a tubercular new growth—a very unfavourable condition for the operation—but it often undergoes, in most acute forms of pleurisy, a considerable degree of thickening, which renders it rigid like cartilage. In a case of this kind, Estlander's operation would not suffice, and it would be found necessary to cut away some of this indurated tissue. A case is related in which, after a resection of small portions of the sixth and seventh ribs, and removal of portions, each five centimètres in extent, of the eighth and ninth ribs, M. Bouilly cut away the hard and thickened parietal pleura with scissors and bistoury, and thus exposed a large and deep cavity, which was stuffed with iodoform gauze. This treatment, it is anticipated, will rapidly result in decided cure.

3451. *Parkes on Gunshot-Wounds of the Small Intestines.*—In an address read at the meeting of the American Medical Association, held in May 1884, Professor Charles T. Parkes, the chairman of the section of Surgery, presented the accompanying phenomena, the manner of treatment, and the results of thirty-seven intentional gunshot-wounds of the abdomen in animals. The author, during some few months, had carried out a series of experiments for the purpose of ascertaining the results to be obtained by immediate operations after these wounds, with the hope that the relation of the attending circumstances and events would be interesting as well as useful, by adding further data from which might be determined more intelligibly the course of action to be adopted when those cases come under notice. To the published report of this paper there is added a somewhat extended account of each experiment. No preparation of the animals selected for experiment was made, either as to choice of physical condition or surrounding circumstances, except that they were anæsthetised previously to being hurt. The following conclusions are given by Professor Parkes 'as an outgrowth of these experiments.' 1. Hæmorrhage, following gunshot-wounds of the abdomen and intestines, is very often so severe that it cannot be safely controlled without abdominal section; it is always sufficient in amount to endanger life by secondary septic decomposition, which cannot be avoided in any other way than by the same treatment. 2. Extravasations of the contents of the bowel after gunshot injuries thereof are as certain as the existence of the wound. 3. No reliable inference as to the course of a bullet can be made from the position of the wounds of entrance and exit. 4. The wounds of entrance and exit of the bullet should not be disturbed in any manner, except to control bleeding or remove foreign bodies when present. They need only to be covered by the general antiseptic dressing applied to the abdomen. 5. Several perforations of the intestines close together require a single resection, including all the openings. Wounds destroying the mesenteric surface of the bowel always require resection. 6. The best means of uniting the wounded intestine after resection is by the use of fine silk thread, after Lembert's method. It must include at least one-third of an inch of bowel-tissue, passing through only the peritoneal and muscular coats, never including the mucous coat. The everted mucous membrane must be carefully inverted, and needs no other treatment. 7. Wounds of the stomach, small perforations, and abrasions of the intestine, can be safely trusted to the continued catgut suture. 8. Every bleeding point must be ligatured or cauterised, and especial care devoted to securing an absolutely clean cavity. 9. The best method of treating the stumps of divided mesentery is to save the mesenteric surface of the bowel as above indicated. 10. Primary abdominal section in the mid-line gives the best command over the damage done, and furnishes the most feasible opening through which the proper surgical treatment of such damage can be instituted. Further, its adoption adds but little, if anything, to the peril of the injury. 11. Is not the moral effect of the assurance to the patient that he will be placed in a condition most likely to lead to his recovery, a good substitute for the mental depression accompanying the general and popular conviction that these wounds mean certain death?

3452. *Burckhardt on the Operative Treatment of Cystic Goître.*—Dr. H. Burckhardt, of Stuttgart, advocates in the *Centralblatt für Chirurgie*, No. 43, 1884, 'shelling out' of the tumour in cases of cystic goître with a single cyst. Extirpation of the whole of the affected gland, he states, is rarely justifiable in such cases, and the methods of injection with iodine solution or some other fluid, and of incision with suturing of the cyst-wall to the margins of the wound through the skin are uncertain, risky, and tedious. The cyst, it is pointed out, is always covered by the capsule of the thyroid body, and it is necessary therefore in the author's operation to divide this membrane. In some cases, the capsule here and there on the surface of the cyst is extremely thin, but at other parts there is an intervening layer, varying in thickness, of glandular structure. With very superficial cysts such as are usually developed at the upper part of a lobe of the thyroid body, the layer of glandular structures between the capsule and the proper cyst-wall is so limited in extent, that it is often possible to remove the tumour by tying its pedicle without any division of the capsule. If there be a considerable extent of glandular structure over the surface of the cyst, it is impossible thus to remove the tumour; and in such a condition, when the layer of glandular structure is thick, an incision through this and the capsule may be followed by serious bleeding. Great stress is laid on observation of the course and size of the vessels as a means of determining whether the wall of the cyst has been reached or is yet covered by a layer of the thyroid capsule. In the wall of the cyst no vessels of any large size run parallel to its surface, and the large vessels connected with the cyst as they pass into it take a direction almost at right angles to its wall. In some cases, most of the cystic growth is deeply imbedded in the substance of the

thyroid gland. Then there is usually a closer connection of the cyst-wall with the glandular structure than with the capsule, and the vascular communications are much more numerous. The following description is given of Dr. Burckhardt's operation. After exposure of the tumour by an incision along the anterior edge of the sterno-mastoid in case of a lateral cyst, and by one in the middle line in case of median cyst, the capsule of the thyroid body is divided over the upper two-thirds of the growth, regard being paid to the above-mentioned arrangement of the vessels which before division should each be secured by a double ligature. If the cyst-wall be covered by a layer of glandular structure, which may be readily recognised by its peculiar red colour, this should be divided and the surface of the cyst be laid bare. This stage is not attended with any serious hæmorrhage, probably because the glandular structure has been altered in consequence of its compression by the cyst. This growth is now 'shelled out' on both sides. For this purpose use is made either of a blunt-pointed probe or, in preference, of Kocher's 'goître probe.' In cases of close connection between the capsule of the thyroid and the cyst-wall, the surgeon must endeavour to avoid the latter, and to work between the layers of the capsule. If the tumour be accidentally incised before it has been detached, the cyst-wall should be divided for its whole length in front, and the contents of the cyst be cleared out. After removal of the whole growth, the wound is drained and its edges are exactly brought together by sutures. This contribution concludes with a brief analysis of seventeen cases in which the author has applied this operation, usually for the relief of dyspnœa. The treatment in each of these cases was attended with good results.

3453. *Tiffany on Deligation of the Common Femoral Artery.*—In a paper read before the American Surgical Association in April, Professor McLane Tiffany, of the University of Maryland, recorded a case of large aneurism of the femoral artery, which extended upwards to within two or three inches of Poupart's ligament, and which, after the failure of pressure, was cured by deligation of the common femoral artery with silk half an inch below the ligament. The patient was a male mulatto, aged 58. After a reference to Rabe's analysis of 178 deligations of the common femoral for all causes, published in 1875 (*Deutsche Zeitschrift für Chir.*, Band v., Heft 2 and 3), Professor Tiffany gives brief histories of a certain number of cases of this operation that occurred during the American War. One was a successful case of traumatic aneurism, which had formed after an injury to the superficial femoral artery without primary hæmorrhage. The femoral artery was tied above the profunda. The ligature separated on the ninth day, and the patient recovered. Of secondary hæmorrhage after amputation there are four cases with two recoveries; and of secondary hæmorrhage after a wound, there are recorded thirteen instances, of which two recovered. Rabe included in his tables ten cases of deligation of the common femoral for elephantiasis, of which nine were successful and one was fatal. The same tables contained twelve cases of deligation of this artery for spontaneous aneurism, with six recoveries and a like number of deaths; but successful cases that had been recorded by Porter, Smyly, and Mott, are not to be found in this list. Professor Tiffany states that, from a study of the unfavourable cases, it appears that death is generally brought about by hæmorrhage. This hæmorrhage is to be explained by the variable anatomy of the vessel, which is sometimes long, sometimes extremely short. The length usually ascribed to the common femoral artery is from one to two inches, probably more often one than two. A fair average, it is held, would be one and a quarter inches; and inasmuch as the separation of a ligature from a tied artery is generally attended with hæmorrhage if a large branch be close at hand, the amount of working space afforded to the surgeon does not appear excessive. It must, however, be remembered that variation in origin is not the prerogative of the deep femoral only, but that the epigastric and circumflex iliac arteries are given off by the external iliac at a variable distance above Poupart's ligament. When, therefore, the common femoral is under consideration with a view to deligation, and the origin of the profunda is discussed, due regard must be paid to the possible extent of external iliac without branches above Poupart's ligament; and, should the commencement of the profunda be exposed, the operator will apply the ligature above or below, or tie both vessels, according as his judgment may direct after careful examination. By the study of recorded cases Professor Tiffany has been led to the following conclusions. 1. Deligation of the common femoral artery in continuity for distal wound is attended with great mortality, and should not be substituted for the application of ligatures to the injured artery above and below the seat of the wound. 2. Deligation of the common femoral for elephantiasis or aneurism is a justifiable operation. 3. The crural sheath should be freely opened, and the vessel carefully examined for the origins of the profunda and epigastric, the ligature not to be tied within a half or three-quarters of an inch of either. 4. Half or three-quarters of an inch below Poupart's ligament will probably be the most favourable locality for the ligature. 5. The presence of a small branch near the seat of ligature does not contra-indicate the operation; such branch should be also tied.

3454. *Von Wahl on the Auscultatory Phenomena in Cases of Arterial Wound and Traumatic Aneurism.*—The following conclusions, based on the results both of experiment and of clinical observation, are given in a contribution by Professor E. von Wahl, of Dorpat, to the *Deutsche Zeitschr. für Chir.*, Band xxi., Heft. 1 and 2. 1. In every case of partial division of a large artery, through which the blood still flows in a diminished stream, there may be made out on auscultation an intermittent blowing or rasping murmur isochronous with the pulse, which sound is most distinct at the seat of injury, and may be followed both upwards and downwards along the course of the artery, but always to a greater distance in the direction of the current of blood. In most of the cases of this kind, the pulse may still be felt below the seat of injury, though it is much weaker than that of the sound side. 2. When, in more extensive though still partial wound of the wall of a large arterial trunk—as in a stab or gunshot-wound—the effusion of blood is speedily arrested by clot, a peri-arterial hæmatoma of greater or less extent is formed, which usually does not pulsate, but has a distinctly audible murmur isochronous with the pulse. 3. In cases of complete division of a large artery with retraction and temporary closure of the ends, and of temporary closure by a thrombus of a partially divided artery—in every instance, in fact, of interruption of the current of blood—there is no murmur to be

heard, but the wound of the artery may be positively determined from absence of pulse below the seat of injury. 4. On reopening of one of the retracted ends, whether central or peripheral, of a completely divided artery, there is developed in most cases a rapidly extending pulsatile hæmatoma, which has no murmur except when the vein also is wounded and arterial blood is poured into the venous circulation. According to von Wahl, if a surgeon can always diagnose with precision a wound of a large artery, although the main symptom of such injury—viz., hæmorrhage—be absent, Guthrie's law, 'that no operation should be performed on a wounded artery unless it bleeds,' has for the future lost its validity. The period during which there is no hæmorrhage ought to be utilised in order to remove any risk of secondary bleeding, which was the cause of death in from 60 to 80 per cent. of the collected cases of arterial wounds. In this period of arrest the surgeon, it is held, should expose the wounded vessel and apply a double ligature. This can be done now under favourable conditions, and at the same time the recently effused blood can be cleared away.

W. Johnson Smith.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

3455. Gunning.—Hazeline as a Hæmostatic Agent. (*Brit. Med. Jour.*, October, p. 711.)

3456. Shoemaker.—The Oleates. (*Brit. Med. Jour.*, October, p. 749.)

3457. Smith.—Willow-charcoal in Diarrhœa. (*Brit. Med. Jour.*, October, p. 711.)

3458. Hayward.—Portable Antiseptics. (*Brit. Med. Jour.*, October, p. 759.)

3459. Quinine and Honey. (*Lancet*, October, p. 669.)

3460. Cookson.—The Preparation of Grey Powder. (*Lancet*, October, p. 616.)

3461. Suñol, J. T.—Ergotine in Diseases of the Lung, especially Pneumonia. (*La Independencia Med.*, and *El Siglo Medico*, Oct. 12.)

3462. Muñoz, D. A.—Two cases of Hæmorrhagic Small-pox treated successfully with Hypodermic Injections of Ergotine. (*La Medicina Contemp.*, and *El Siglo Medic.*, Oct. 5, 1884.)

3463. Olavide, J. E.—Sydenham's Laudanum in Diarrhœa. (*El Genio Medico-Quirurgico*, Oct. 7, 1884.)

3464. Maj, J.—Ethereal Extract of Male Fern in the Treatment of Cholera. (*Gazz. Med. Ital. Lombardia*, Nov. 15, 1884.)

3465. Schuster.—The Elimination of Mercury.

3466. Schultze.—Influence of Potassium Bromide on Nutrition. (*Zeitschr. für Biol.*)

3467. Brouardel.—Salicylic Acid as a Food-Preservative. (*Annales d'Hygiène.*)

3468. Bragin.—On the use of Trichlorphenol in Erysipelatous Processes. (*Ejened. Klin. Gazeta*, No. 13, 1884, p. 236.)

3469. Andeer.—Resorcin in Laryngeal Affections. (*Centralbl. für die gesammte Therapie*, April.)

3470. Cantani.—The Treatment of Nephritis. (*Centralbl. für die gesammte Therapie*, April.)

3471. Pick.—On Suppositories of Quinine. (*Deutsche Med. Wochensch.*, May 1.)

3472. Riegel.—The Therapeutic Uses of Caffein. (*Wiener Med. Blätter*, May 15.)

3473. Becher.—Caffein in Heart-disease. (*Wiener Med. Blätter*, May 22.)

3474. Dazio.—Corrosive Sublimate in Diphtheria. (*Giornale Internaz. delle Sci. Med.*, Fasc. ix., 1884.)

3475. Worm-Müller.—Bromide of Potassium in Diabetes Mellitus. (*Norsk Magazin for Lægevidensk.*, Band xiii.; and *Nord. Medicin. Arkiv*, Band xv., Heft 4.)

3476. Erlenmeyer.—The Treatment of Paralysis Agitans. (*Centralbl. für Nervenheilkunde, Psychiatrie*, May 1883.)

3477. Eulenburg.—Osmic Acid in Neuralgia. (*Berlin Wochensch.*, Feb. 18, p. 99.)

3478. Wildermuth.—Osmic Acid in Epilepsy. (*Berlin. Klin. Wochensch.*, June 9, 1884, p. 358.)

3479. Von Noorden, Kurz, and Langreuter.—On Paraldehyde. (*Centralbl. für Klin. Medicin*, March 22, 1884, May 3, 1884; *Berlin. Klin. Wochensch.*, June 16, 1884.)

Art. 3455. *Gunning on Hazeline as a Hæmostatic Agent.*—Mr. J. Gunning, in the *Brit. Med. Jour.*, Oct. 1884, p. 711, records the case of a young lady, aged 13, who suffered from excessive menstruation, and for whom the author prescribed ergot, gallic acid, sulphuric acid, &c., without giving relief. He then tried half-drachm doses of hazeline every four hours. After taking four doses the discharge ceased, and did not return. A case is also recorded where after injury the first joint of the thumb had been constantly bleeding, every three or four days for a month. The wound was then washed with a lotion of hazeline and water in equal parts, and a piece of lint soaked in hazeline applied. In four days, the wound had completely healed. Subsequent observers deny that hazeline has any marked value in menorrhagia, being far inferior to bromide of potassium.

3456. *Shoemaker on Oleates.*—In the *Brit. Med. Jour.*, October 1884, p. 749, is published a discussion, opened by Dr. Shoemaker at the annual meeting of the British Medical Association, on the subject of oleates. The principal advantage of the oleates is their solubility in fatty vehicles, by which they are enabled to penetrate, not through the skin and the walls of the vessels, as might be inferred from the writings of some, but into the natural openings of the skin, into the glands and follicles. There they may, by osmosis, interchange with some of the systemic fluids, and be absorbed to a certain extent; but physiological experiments seem to make even this most unlikely. The only instance in which this seems to be the case is with the mercurous oleate, which is so loosely attached to its fatty radicle as to easily give it up in exchange for other acids, forming salts with them which are more readily absorbed and assimilated, producing then the characteristic effects and symptoms of the drug. Dr. Shoemaker says that the use of vaseline in the place of lard, as an ointment, in such mixtures as contain a remedial agent intended for absorption by the skin, is much to be discouraged, because vaseline prevents the absorption thereof. The various oleates are next described, and the affections in which they prove most beneficial are given, together with the manner of preparation and method of application. In conclusion, the author states that, although the oleates have not been found to fill the place originally intended by those who introduced them, they have made for themselves a most prominent place amongst the more scientific means we possess for treating cutaneous affections.

3457. *Smith on Willow-charcoal in Diarrhœa.*—Dr. Samuel W. Smith, in the *Brit. Med. Jour.*,

October 1884, p. 711, writes that in 1858 he was induced to use a black powder sold to sailors for the cure of diarrhœa. It proved to be made of willow-charcoal, and was most valuable in cases of diarrhœa, both on board-ship and on shore. The powder obtained from druggists failed to do the good which that obtained from Liverpool, through a ship's captain, had done.

3458. *Hayward on Portable Antiseptics.*—In the *Brit. Med. Jour.*, Oct. 1884, p. 759, Mr. T. E. Hayward suggests a plan of preparing corrosive sublimate, so that a portable antiseptic can be carried with ease by general practitioners. If ten grains of corrosive sublimate and ten grains of chloride of ammonium, both as powder, be carried in the pocket, wrapped round with gutta-percha tissue to avoid deliquescence, a solution can be readily obtained, as the powder will freely dissolve in water; and thus, by adding one of the powders to a pint of water, a solution is obtained of the strength of 1 in 960. A few of these powders can be carried in the pocket-case with more safety than the solution in glycerine, lately recommended by Sir Joseph Lister.

3459. *Quinine and Honey.*—In the *Lancet*, Oct. 1884, p. 669, honey is suggested as a good vehicle for the administration of quinine to children. If the alkaloid be placed in the centre of a small spoonful of honey, the strongest aversion to the flavour will be entirely overcome.

3460. *Cookson on the Preparation of Grey Powder.* In the *Lancet*, October 1884, p. 616, Dr. Cookson writes that many years ago, in the *Indian Medical Gazette*, he called attention to the tendency of the mercury in this preparation to assume the dangerous form of red oxide. He finds that mercury with magnesia is perfectly stable, provided pure mercury be used, and no other ingredient be added to the magnesian carbonate to expedite the minute division of the mercury, which must be affected by long-continued trituration. It is immaterial whether the light or the heavy form of magnesian carbonate be used. Richard Neale, M.D.

3461. *Suñol on Ergotine in Diseases of the Lung, especially Pneumonia.*—The principal action of ergot is manifested on the unstriped muscular fibres, whose contractile power it excites. Hence it is used with advantage in diseases accompanied by vascular alterations (hæmorrhage, congestion), or by paralysis of various muscular organs. In acute affections of the respiratory apparatus ergotine may be used; in intense bronchitis, especially when there is difficulty of expectoration, and in hæmoptysis, it empties the vessels and contracts the muscles of Reissessen. Its effects are excellent in certain complications of pneumonia, such as collateral congestion, and when the sputa are rather hæmorrhagic than rusty. The dyspnœa is relieved and the temperature falls, expectoration is more easy, and the delirium is less. Pregnancy is not an absolute contra-indication to its employment, provided the dose is not excessive. In pulmonary engorgement, it may take the place of bleeding. It has little influence on the duration of the disease, which runs the same course; and if it shorten the illness, it is by correcting the complications. The indications for its employment are symptomatic, but the benefit derived from it when thus employed is incontestable.

3462. *Muñoz on Hæmorrhagic Small-pox treated successfully with Hypodermic Injections of Ergotine.*—1. A woman, aged 28, was in the sixth or seventh month of pregnancy. At the end of the first week the small-pox became hæmorrhagic, and at the same time uterine hæmorrhage and labour-pains appeared. The os uteri being dilated and the pains weak, two hypodermic injections of ergotine into the gluteal muscles were given. The hæmorrhage ceased after the first injection. The child, a female, was covered with the rash, and only lived four hours. After this the disease ran its usual course, there was no metrorrhagia, the lochia being normal, and the subcutaneous capillary hæmorrhages disappeared. 2. A woman, 27, was four months pregnant. Abortion took place two days after the appearance of the fever of small-pox; this was hæmorrhagic in character from the first, there being subcutaneous capillary hæmorrhage, hæmoptysis, and hæmaturia. After the abortion, the hypodermic injections, two or three in the day for six days, were given. Notwithstanding the previous weak state of the patient, and the intensity of the disease, which led Dr. Muñoz to form a very unfavourable prognosis, she recovered completely though slowly, the treatment clearly modifying the hæmorrhagic form of the disease.

3463. *Olavide on Sydenham's Laudanum in Diarrhœa.*—Sydenham's laudanum (which contains saffron) is a favourite remedy in diarrhœa and cholera. Dr. Olavide has made a series of experiments to determine its action on common and diarrhœal bacteria. He finds that it kills instantaneously the bacteria of putrefaction and of butyric fermentation, and that, strange to say, this action is owing to the saffron rather than to the other ingredients. Examining the action of the various components of laudanum singly, he found that, on mixing a drop of 1 per cent. solution of hydrochlorate of morphia with a drop of the liquid containing the bacteria, the movements of the bacteria did not finally cease for twenty minutes. A solution of opium, 5 in 100, also only killed them in from fifteen to twenty minutes. On adding infusion of saffron to the liquid containing the bacteria, they were at once killed, and no further movement was seen, even though the preparation was afterwards diluted with distilled water. He finds that garlic, onion, and parsley favour the activity of the bacteria; these therefore should not be eaten when diarrhœa is prevalent. The juice of either, added to the bacteria-containing liquid, caused the movement of the organisms to be more energetic, but on the addition of the saffron infusion these movements at once ceased. A solution of acetic acid, 1 per cent., or vinegar, also causes instant death of the bacteria.

3464. *Maj on Ethereal Extract of Male Fern in the Treatment of Cholera.*—The extraordinary success the author has obtained in the treatment of another parasitic disease, ankylostomiasis, with the ethereal extract of male fern, led him to try it in cholera. Nine cases have been so treated. His formula is the following: ℞ mucilage of acacia, 150 grammes; laudanum (Sydenham's), 5 to 8 drops; syrup of orange-peel, 25 grammes; dissolve and add ethereal extract of male fern, 2 or 3 grammes. This is to be taken in three doses, and to be repeated; the amount of the ethereal extract of male fern being increased, according to the state and constitution of the patient and the intensity of the cholera symptoms, the quantity of laudanum being diminished. Of stimulants he prefers rum, given in coffee, brandy, and Marsala. In the algide stage, he orders frictions of camphorated spirit and ethereal oil of mustard. Of

the nine cases, the first, a girl, aged 12, of lymphatic temperament, died on the second day; another girl, aged 19, died on the twelfth day, in consequence of typhus supervening; a third, aged 20, extremely cachectic, died on the appearance of typhus on the eighth day. The other six recovered, and the author says that this result is to be attributed to the treatment, as the cases being severe spontaneous recovery could not reasonably be expected. He would not use energetic astringents in the diarrhœa of cholera, spontaneous cure apparently occurring from the complete evacuation of the cholerigenic virus by means of the dejections. Of the efficiency of male fern against the cholera virus he is convinced, whether the virus originate in the intestine or be imported by external agents, whether it be cause or effect. On the immense importance of early treatment he also insists. G. D'Arcy Adams, M.D.

3465. *Schuster on the Elimination of Mercury.*—When mercury enters the system by inunction, it has been found regularly in relatively large proportion in the fæces; and it was found here nearly six months after the completion of the mercurial course. In all the cases in which its presence was detected in the urine it was likewise met with in the fæces, but the converse was frequently found not to occur. Elimination of mercury by the fæces may therefore be regarded as regular and continuous, although very slow in its progress.

3466. *Schultze on the Influence of Potassium Bromide on Nutrition.*—The favourable results obtained from the use of potassium bromide in different nervous affections, particularly epilepsy, lead one to conclude that the nervous functions are influenced by this drug. B. Schultze (*Zeitschr. für Biologie*, No. 19) made a series of experiments on himself, taking the bromide in ten-gramme doses daily for some days. He found a large increase in the volume of the urine on the day the drug was taken. The nitrogen excreted was determined in the urine and the fæces, but the influence of the bromide upon its elimination was not marked; the sulphur, however, was found to be increased, and the phosphorus diminished. The author, therefore, concludes that under the influence of this drug the metabolic activity of the nerve-centres is diminished, this being accompanied by a decided diminution of the nervous activity.

3467. *Brouardel on Salicylic Acid as a Food-Preservative.*—The Comité Consultatif d'Hygiène Publique has on two occasions reported against the employment of this agent for preserving articles of food. In a recent number of the *Annales d'Hygiène*, Professor Brouardel, in reporting the conclusions of a subcommittee of the same society which reconsidered this subject, observes that the use of this reagent is contra-indicated in the subjects of those diseases which prevent its due elimination. In aged persons this elimination occurs very slowly; and the same seems to be the case in some individuals in whom the kidneys and liver, the organs by which the salicylate is normally discharged from the economy, appear to be healthy, yet the elimination is impeded from some unknown cause. It would, indeed, appear that in the case of aged persons, albuminurics, and individuals suffering from various hepatic and renal diseases, it would be highly dangerous to administer this drug for any length of time. Accordingly, its use as a food-preservative cannot with safety be sanctioned.

T. Cranstoun Charles, M.D.

3468. *Bragin on Trichlorphenol in Erysipelas.*—In the *Ejened. Klin. Gazeta*, No. 13, 1884, p. 236, Dr. Bragin, of the Life-Guard Finland Regiment, describes eight cases of erysipelas treated by painting, three times daily, with 5 per cent. solution of trichlorphenol. The painted parts were kept covered with a thin layer of hygroscopic wadding. In all the cases, after several applications, redness and tension diminished, and the spread of erysipelas became slower. From fifteen to eighteen paintings were usually sufficient to cure the disease.

V. Idelson, M.D.

3469. *Andeer on Resorcin in Laryngeal Affections.* The *Centralbl. für die gesammte Therapie* for April contains a report by Dr. Justus Andeer on the action of resorcin in laryngeal affections. It has been found to act locally, not only as a disinfectant but also as an anæsthetic. Only in concentrated solution has it a caustic effect, the mucous membrane recovering completely without any scar, so that it may be safely and beneficially used as a caustic in all forms of laryngitis. In tuberculous ulceration it subdues pain and cough.

3470. *Cantani on the Treatment of Nephritis.*—An article by Professor Cantani on the treatment of nephritis is reported in the *Centralbl. für die gesammte Therapie* for April. In acute forms he recommends expectant treatment, rest in bed with warm coverings, abstinence from fluids, and inunction with oil, followed by packing in blankets. Warm baths may be used to facilitate diaphoresis. Diuretics and purgatives are contra-indicated, as they increase the loss of albumen, and favour hydræmia. The diet must be bland, and milk diet is the best; eggs do not increase the albuminuria. Less acute cases will be benefited by the employment of tannate of quinine and gallic acid, with alkalies if the urine be scanty on account of stoppage of the canaliculi. In chronic cases, parenchymatous nephritis must be distinguished from interstitial. In the parenchymatous forms, attention must be paid to the condition of the skin, and diaphoresis induced when necessary. Meat or fish may be given to repair the waste of albumen, but stimulants are to be carefully avoided, unless absolutely necessary. Gallic acid is to be preferred to tannic for internal administration, and diaphoretics must be used rather than diuretics. Drastic purgatives must be resorted to only when a prompt and temporary action on the intestines is desired, as in threatening uræmia. Interstitial nephritis tending to atrophy requires no diaphoretics or diuretics; oil may be used for the dryness of the skin. Iodide of potassium, recommended by Bartels, has no influence in retarding the hypertrophy of the connective tissue. It may be useful, like other alkalies, in counteracting the cardiac hypertrophy. Digitalis is beneficial for the frequent and incomplete cardiac contractions.

3471. *Pick on Suppositories of Quinine.*—Dr. Pick, of Coblenz, writes to the *Deutsche Med. Wochensch.*, of May 1, to recommend the administration of quinine in the form of suppositories, in the case of children, or where giving by the mouth is contra-indicated. In cases where he has used it, the suppository, containing 1 to 2 grammes (15 to 30 grains) of quinine, has sufficed to lower the temperature so much that a repetition has been unnecessary. The rectum should be cleared by an enema beforehand; and it is advisable to push the suppository as far above the sphincter as possible, otherwise the amount of irritation which it produces,

although that is inconsiderable, may cause its premature expulsion. Dr. Pick acknowledges that he is not bringing anything new before the profession, but is merely directing attention to a form of administration which has been known for some time, but has been too much neglected.

3472. *Riegel on the Therapeutic Uses of Caffein.*—In the *Wien. Med. Blätter*, of May 15, Professor Riegel, of Giessen, writes recommending caffein as a substitute for digitalis in cardiac affections. He has tried it in several cases, chiefly in the form of a double salt of soda, and has found it of great service. It regulates the heart's action, diminishing the frequency while it increases the volume of the pulse, and increases the urinary secretion. It is suitable for all cases in which digitalis is indicated, and it sometimes succeeds where the better known remedy fails. Its action is also more prompt than that of digitalis, and it has no cumulative effect. It is most efficacious when given in repeated small doses.

3473. *Becher on Caffein in Heart-disease.*—In the *Wien. Med. Blätter*, of May 22, Dr. Carl Becher cites some cases in Professor Nothnagel's clinic, where caffein had been employed in cardiac affections, to the amount of 2 grammes (30 grains) pro die. It was found to be in some cases more efficacious than digitalis, and in all cases the absence of cumulative action was very beneficial. The citrate was most frequently employed, and sometimes, also, the hydrobromate. Toxic effects, consisting of confusion in the head, giddiness, and vomiting, were observed in one case after the administration of 2 grammes a day, but larger doses were taken repeatedly without producing any disagreeable symptoms. Alice Ker, M.D.

3474. *Dazio on Corrosive Sublimate in Diphtheria.*—Local application of a solution of corrosive sublimate (1 in 1,000) has gained the confidence of Dr. Dazio, after a long experience had shown the uselessness of other remedies. [Prof. Jacobi, of New York, uses the same drug internally.—*Rep.*]

William R. Huggard, M.D.

3475. *Worm-Müller on Bromide of Potassium in Diabetes Mellitus.*—The use of bromide of potassium in diabetes has been recommended by Dr. G. Felizet; but Dr. Worm-Müller describes, in the *Norsk Magazin for Lægevidensk.*, a case in which the administration of this drug was not followed by success. The patient was a man aged 33, who came under Dr. Worm-Müller's care in February 1881. He had suffered from diabetes since 1880. The urine contained 5 per cent. of sugar. His diet was exclusively animal. On March 13 there was no sugar, and his weight had increased from 66 to 70 kilogrammes (about 145½ to 154⅓ pounds). He was allowed a little bread with his dinner. Little or no sugar was found in the urine, the same diet having been continued until October 1882, when 1 per cent. was detected. The quantity of bread was diminished to one-half. The sugar remained unchanged. From Nov. 7 to 21, 40 grains of bromide of potassium were given; under its use the sugar rose to 3·4 per cent. The use of the bromide was then stopped; and on Dec. 1, the diet being exclusively animal, the percentage of sugar was 3·2. The author points out that the bromide of potassium had no influence in arresting the progress of the disease, even with an exclusively animal diet. A. Henry, M.D.

3476. *Erlenmeyer on the Treatment of Paralysis Agitans.*—Albrecht Erlenmeyer (*Centralbl. für Nervenheilkunde, Psychiatrie*, &c., May 1883) reports his experience in regard to the action of drugs in a severe case of paralysis agitans. The tremor was so severe as to interfere with sleep. One or two tablespoonfuls of the following procured sleep, but had no influence upon the tremor:—℞ Chloral hydrate, 7·5 grammes; muriate of morphia, 5 centigrammes; distilled water, 150 grammes; arrac, 50 grammes. This amount lasted the patient about fourteen days. She took it one and a half years. An infusion of valerian (20 grammes to 200 of water), to which was added 25 grammes of bromide of potassium, in doses of four tablespoonfuls daily, had a marked effect upon the tremor, which was diminished while this was used, but returned when it was omitted. A solution of half a gramme of curare in 15 grammes of distilled water, and two drops of hydrochloric acid was given subcutaneously, one-third, two-thirds, and finally an entire syringeful being used. The larger dose caused the tremor to diminish. The improvement continued about three days. The curare was repeated every five days. The galvanic current from eight cells, used for ten minutes, and later for fifteen minutes, the anode on the forehead, the cathode on the neck, gave very favourable results, but when the treatment was discontinued the tremor returned. ℞ Atropiæ sulph., 3 centigrammes; ext. secal. cornut., 1 gramme; ext. liquir., q.s. Fiant pilulæ 30. One of these taken daily controlled a troublesome sweat, and also diminished the tremor. After nine days this had to be omitted, on account of a slight toxic effect from the atropia. Later, it was taken again with the same result. Crystallised hyoscyamin had no effect upon the tremor unless taken in such doses as to show the beginning of toxic effects. Nitrate of silver had no effect.

3477. *Eulenburg on Osmic Acid in Neuralgia.*—A. Eulenburg (*Berlin. Wochensch.*, Feb. 18, p. 99) was led by Neuber's experience in neuralgia with osmic acid, injecting 1 per cent. aqueous solution, to try the same remedy. He found that the injection of the above strength caused no unpleasant symptoms. He selected twelve cases of neuralgia in different cutaneous nerve-districts of the upper and lower extremities, of the head, and body; most of these were fresh and not unusually severe cases. The treatment extended over one to six weeks; the number of injections in individual cases was three to fourteen. The solution used, 1 per cent., gradually became dark-coloured; even that could be used without injury. The amount injected was half a gramme of the solution, exceptionally one gramme. After the injection there was a slight temporary reddening or swelling in the immediate neighbourhood of the injection. The injection was made at the diseased part. Of twelve cases three were cured (no relapse within two to fourteen weeks); four more or less relieved; five were not benefited. The three cases cured were probably cases of neuritis or perineuritis. Subsequently he used the drug in seventeen other cases; four were cured (two sciatic, one lumbar, one intercostal).

3478. *Wildermuth on Osmic Acid in Epilepsy.*—Wildermuth (*Berlin. Klinische Wochensch.*, June 9, 1884, p. 358) has used osmic acid, or the p tassic osmite, in cases of epilepsy, with only slight success. In seven cases he found no benefit. In two cases improvement followed; in one of these the benefit was about the same as that obtained by the use of bromide of potassium. In the other case the gain was much greater; the patient, a woman, seemed to

be idiotic, indifferent to her surroundings. The attacks were very severe. In 1876 she had 321, in 1881 980; bromide of potassium had no effect upon the attacks. On Jan. 7, 1882, she began to take 2 milligrammes of osmic acid in watery solution; later took 3 to 5 milligrammes in pill. The bromide of potassium was reduced to 2 grammes. The attacks diminished in frequency.

	1881.	1882.
January	131	48
February	121	6
March	125	0
April	121	10
May	11	2
June	9	4
July to December	401	0

The mental condition improved greatly. In 1883 several slight attacks caused the bromide to be increased to 4 and 7 grammes for a short time. Since then the daily dose has been 2 grammes of bromide of potassium and 4 milligrammes of potassic osmite. No further attacks have occurred. The above cases were all chronic, intractable cases. The dose was from 2 to 15 milligrammes a day in pill, each containing 1 milligramme of the acid or the potassic salt; Dr. Wildermuth prefers the latter.

3479. *Von Noorden, Kurz, and Langreuter on Paraldehyde.*—Carl von Noorden (*Centralbl. für Klin. Medicin*, March 22, 1884) gave between 3 and 6 grammes, with equal parts of infusion of orange-peel, in a half wineglass of sugar and water. He saw no evil effects, even from larger doses. Sleep followed in fifteen to forty-five minutes, and in favourable cases continued five to six hours; if accidentally awakened, the patients went to sleep again. Occasionally the taste and smell of the drug remained unpleasantly after waking, but generally no bad effects followed. As contra-indication he mentions severe gastric disease and advanced phthisis, with affection of the throat. Among thirty patients he found only two who were nauseated or had headache from the use of the medicine. Patients with weakened heart bore the drug well, and obtained rest; the arterial tension was not diminished.

E. Kurz (*Centralbl. für Klin. Medicin*, No. 18, May 3, 1884) reports his experience with paraldehyde in twenty-four cases. The dose was 3 grammes, sometimes 4. The sleeplessness was due to different causes. It failed only in four cases. In no case did it have an exciting effect. The sleep began within half an hour after taking the dose, and lasted five to seven hours, sometimes interrupted. Headache did not follow its use; it was not necessary to increase the dose. It causes a very natural sleep, and is of most value when the sleeplessness is not caused by pain or mechanical disturbances, as coughing, dyspnœa, &c. The chief indication is the same as for chloral.

Langreuter (*Berlin. Klin. Wochensch.*, June 16, 1884) has used paraldehyde and acetal to produce sleep, the former in doses of 6 grammes, the acetal in doses of 10 grammes. Acetal is less pleasant in its action, and is weaker than paraldehyde. As vehicle he used olive-oil with oil of peppermint. Both drugs were used for months without unfavourable effect. The taste and odour are unpleasant. When given at bed-time, paraldehyde was successful in causing sleep in 90 per cent.; when given during the day, in 61 per cent. Sleep occurred in five to thirty minutes after taking the dose.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

3480. Hegar, Professor.—New Method of Diagnosing Pregnancy during the Early Months with Certainty. (*Annales de Gynécologie*, Sept. 1884.)

3481. Kehrer.—Perchloride of Mercury as an Obstetrical Antiseptic. (*Archives de Tocologie*, July 1884.)

3482. Rodzewicz.—Two Cases of severe Vomiting in Pregnancy cured by the Administration of Beer. (*Russkaia Meditz.*, No. 28, 1884, p. 582.)

3483. Polansky, P.—On Beer in Excessive Vomiting in Pregnancy. (*Russkaia Meditzina*, No. 35, 1884, p. 726.)

3484. Wiltshire. — Pelvic Hæmatocele. (*Lancet*, September, p. 531.)

3485. Richardson.—Iron-alum in Uterine Hæmorrhage. (*Brit. Med. Jour.*, September, p. 605.)

3486. Esler.—Two Cases of Phlegmasia Dolens in the Right Lower Extremity. (*Brit. Med. Jour.*, Sept., p. 463.)

3487. Olshausen.—On a Peculiar Variety of Ovarian Tumour. (57 *Versammlung Deutscher Naturforscher und Aerzte*; *Sektion für Gynäkologie.*)

Art. 3480. *Hegar on a Method of Diagnosing Pregnancy during the Early Months with Certainty.*—The sign on which Professor Hegar comments (*Annales de Gynécologie*, Sept. 1884) is a peculiar softness, a certain subtileness, and a thinning of the lower segment of the uterus—*i.e.* of the part of the uterus which is immediately above the insertion of the sacral uterine ligaments. This condition can be easily verified, not only when the uterus is resistant, as is usual, but still more so when it is elastic and soft. Even in these cases it is possible, by depressing the lower part of the uterus to distinguish it from the superior portions, and from the rigid cervix. The softness of this part is such that one might imagine that the cervix was simply in contact with a pelvic or abdominal tumour. We do not know what pathological condition of the womb can present such symptoms. The cause of this remarkable sign exists in the fact that the inferior segment of the uterus becomes during pregnancy the finest part, the softest, and the most elastic. It thence results that, in practising the rectal touch with abdominal palpation, it is possible to feel between the fingers this portion of the uterus with the characters it presents.

3481. *Kehrer on Perchloride of Mercury as an Obstetrical Antiseptic.*—Of late, perchloride of mercury has been the subject of considerable investigation as an antiseptic in midwifery, and the results have been very satisfactory. Professor Tarnier (*Archives de Tocologie*, July 1884) has reminded us recently how French researches on this point have been overlooked on the other side of the frontier. In a communication by Professor Kehrer, which has been lately published, the following results are arrived at. 1. Perchloride of mercury is the most powerful of all antiseptics. 2. A solution of one in a thousand has been shown to be sufficient to completely destroy the germinative power of microbes. 3. A solution of 1 in 100,000, added to liquids in which microbes were being cultivated, arrested their development. 4. A solution of 1 in 333,000 definitely arrests the development of the microbes. Out of 221 lying-in women, Professor Kehrer only observed four cases of temporary

urticaria, and three cases of mercurial stomatitis in three syphilitic patients. In conclusion, the chief drawbacks of the sublimate are a roughening of the hands and easily rusting instruments, making sponges stiff, and giving a deep coloration to any small depressions of the skin. Professor Kehrer warmly recommends the employment of perchloride of mercury during labour and lying-in.

FANCOURT BARNES, M.D.

3482. *Rodzewicz on Beer in Severe Vomiting in Pregnancy.*—In the *Russkaia Meditz.*, No. 28, 1884, p. 582, Dr. O. Rodzewicz, of Orenburg, describes two severe cases of excessive vomiting in pregnancy, where the patients (in the fourth and third months) vomited almost hourly, and where sickness completely disappeared from the next day after the patients had commenced to drink beer. [The quantity is not stated.—*Rep.*]

3483. *Polansky on Beer in Excessive Vomiting in Pregnancy.*—The successful cases, communicated by Dr. Rodzewicz, induced Dr. P. Polansky, of Nijni-Novgorod (*Russkaia Meditzina*, No. 35, 1884), to try beer, a glass at supper and dinner, in the case of a primipara, aged 25, in early period of pregnancy, with eight to ten daily attacks of vomiting. On the first day of the treatment the patient vomited only once, after which sickness entirely disappeared and did not return, though the treatment was continued only for four days. V. IDELSON, M.D.

3484. *Wiltshire on Pelvic Hæmatocele.*—In the *Lancet*, Sept. 1884, p. 531, is published an interesting lecture delivered by Dr. Wiltshire at St. Mary's Hospital. The subject of the lecture is 'Pelvic Hæmatocele,' and it comprises the various forms of blood-effusion occurring in the pelvic region or pelvi-abdominal cavity. Effusions of blood, of the kind in question, occur mostly during menstrual life, and commonly between the ages of twenty and thirty-five. Typical cases are cited, and a summary is given of evidence which proves that the peritoneum will bear a suddenly produced strain to an enormous extent without rent. The symptoms of pelvic hæmatocele are thus summed up. The one-sided pain of a sharp character low down in the pelvis and down the genitals and thighs; the breathlessness, collapse, and in very severe cases, convulsions from loss of blood; the cold sweats, the thirst, vomiting, and low temperature of the body; the attitude, the legs significantly drawn up, the one on the side of the lesion usually the more so; the threading flickering pulse, the dysuria and bearing-down in the private parts—all tell their tale plainly enough. As to the treatment of pelvic hæmatocele, the cardinal treatment in most cases is absolute rest, and opium given in one-grain doses. One of the most interesting points in the lecture is the observation that some cases of hæmatocele are followed by marked jaundice of the patient. This jaundice is not of biliary origin, but is due to the absorption of the colouring matter of the blood, when there has been a large effusion.

3485. *Richardson on Iron-alum in Uterine Hæmorrhage.*—In the *Brit. Med. Jour.*, September 1884, p. 605, is published a paper, read at the annual meeting of the British Medical Association, by the late Mr. R. Richardson, of Rhayader, on the treatment of uterine hæmorrhage. During the last twenty years, the author found great success from using iron-alum. It is to be introduced with the finger up to the os uteri (and not into it), and to be applied in the form of crystals, about the size of a hazel-nut, or even larger in severe cases. The uterus will at once contract, a firm coagulum is formed, and the hæmorrhage at once ceases. Notes are given of six cases in which the application of iron-alum was said to be successful, and the author stated that he had a record of eighty-two cases of uterine hæmorrhage where this remedy was applied without a single failure. Dr. Murphy, of Sunderland, made some remarks after the reading of Mr. Richardson's paper, in which he said that the success of the cases recorded was not due to the use of the iron-alum alone, and that the causes and sources of uterine hæmorrhage were too various to be amenable to a single method of treatment. [Dr. Griswold, in 1880, highly extolled the use of a lump of alum for similar purposes. *Vide* sect. 1585 : 3 of the *Medical Digest.* —*Rep.*]

3486. *Esler on Two Cases of Phlegmasia Dolens in the Right Lower Extremity.*—Dr. Esler, in the *Brit. Med. Jour.*, Sept. 1884, p. 463, in a paper read at the annual meeting of the British Medical Association, narrates two cases of phlegmasia dolens, both occurring in the right lower extremity, in the same hospital, and nearly together. Both patients lay on the right side during and after labour; and this, it was thought, might account for the right leg being affected. One patient, aged 30, was confined on Oct. 7 of her ninth child. The placenta was retained, and had to be removed. About a week subsequently phlegmasia set in, and the right leg became enormously swollen. On Oct. 30 she was taken to the hospital, where a large pelvic abscess was opened. The patient had been lying on her right side continuously from the time of her confinement. Another patient, aged 32, was admitted on Jan. 4, also suffering from phlegmasia in the right leg. She had been delivered of her fourth child seven days previously. The labour was a difficult one, and was followed by considerable hæmorrhage. This patient had lain persistently on her right side, owing to some chest-affection. Dr. Dill, of Belfast, holds that phlegmasia dolens may be induced by the wearing down of the system from hæmorrhage and irritation of the womb, and somewhat by the position which the patient has kept for a long time. In the discussion that followed, the influence of position causing the disease to affect one leg more than the other was doubted by some of the speakers. RICHARD NEALE, M.D.

3487. *Olshausen on a Peculiar Variety of Ovarian Tumour.*—Thirty years ago, Professor Olshausen asserts, all tumours of the ovary were considered to be anatomically, pathologically, and clinically the same. Since that period, new kinds of ovarian tumour have been discovered almost yearly. Very recently a form of myoma, having a tendency to metastatic reproduction in the peritoneum, has been described. Werth has expressed his doubts as to the alleged metastasis which, in his opinion, is simply inflammatory peritoneal exudation caused by the escape of the fluid contents of the tumour. Olshausen and Ackermann, on the other hand, have examined a case of this kind, and deny that the primary growth is myomatous, but agree that solid deposits found in the peritoneum are metastatic and not inflammatory. [There can be no doubt that some, though by no means all, of the solid ovarian tumours hitherto believed to be fibroid are really myomatous; these true myomata cannot give rise to secondary growths, but often set up great peritoneal irritation owing to their irregular surfaces.—

Rep.] Olshausen also describes a true cystoma of the ovary where masses of thin-walled cysts coalesce, after independent development in different parts of the ovarian stroma, to form a large tumour resembling a bunch of grapes. ALBAN DORAN.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

RECENT PAPERS.

3488. OGSTON, F. — Pistol-shot without External Wound. (*Edin. Med. Jour.*, 1884, p. 720.)

3489. REID.—Application of Dentistry to the Detection of Crime. (*Jour. of British Dental Association*, Sept. 1884.)

3490. CHITTENDEN.—Absorption and Elimination of Poisons. (*Medico-Legal Jour.*, Vol. ii., p. 224.)

3491. SILLIMAN.—Poisoning by Sodium Arsenate. (*Medico-Legal Jour.*, Vol. ii., p. 473.)

3492. JOHNSON, JOHN G.—Poisoning by Canned Goods. (*Medico-Legal Jour.*, Vol. ii., p. 53.)

3493. LOWNDES.—Syphilis after Rape. (*Liverpool Med. and Surg. Jour.*, 1884, p. 299.)

3494. BAGE.—Poisoning by Solanum Pseudo-capsicum. (*Australian Med. Jour.*, 1884, p. 297.)

3495. FORSTER.—Boracic Acid as an Antiseptic. (*Dingl. Polyt. Jour.*, No. ccli., p. 170.)

3496. KELP. — Poisoning by Carbon Disulphide. (Friedreich's *Blätt. für Gerichtl. Med.*, 1884, p. 394.)

3497. KLEIN, E.—Jequirity Seeds. (*Interim Report to Local Government Board*, March 21, 1884, on Pathogenic Organisms.)

3498. ELLENBERGER AND HOFMEISTER.—Action of Copper on the System.

3499. GERRARD.—Test for Atropin. (*American Jour. of Pharmacy.*)

3500. HUBER.—Poisoning by Bad Meat.

3501. ATTFIELD.—The Dangers of Canned Foods. (*Jour. Pharm. Society.*)

3502. SEVERI.—The Length of the Alimentary Canal and of its parts in relation to the age of the Fœtus. (*Lo Sperimentale*, May 1884.)

3503. PELLANCANI.—The Structure of the Spermatic Cord in various periods of life. (*Riv. Sper. di Fren. e di Med. Leg.*, 1883, Fasc. iv., and 1884, Fasc. i. and ii.)

3504. FILOMUSI-GUELFI. — Phosphorus Poisoning. (*Morgagni*, Oct. 1883; *Riv. Sper. di Fren. e di Med. Leg.*, 1884, F. i. and ii.)

3505. BUFALINI.—Poisoning with Hydrocyanic Acid. (*Riv. di Chim. Med. e Farm.*, Feb. 1884.)

3506. VYSOKOVITCH.—On a Case of Fish-poisoning. (*Vratch*, 1884, No. 26, p. 434.)

3507. KHARDIN, V. N.—On the Changes in the Nervous Centres in Poisoning by Carbonic Oxide. (*Vratch*, No. 31, 1884, pp. 521–23; and No. 32, pp. 540–44.)

3508. DAVIDSON. — Poisoning by Pois d'Achery. (*Practitioner*, June, p. 435.)

3509. ADDINSELL.—A Case of Poisoning by Sardines. (*Lancet*, Sept., p. 540.)

ART. 3488. *Ogston on Pistol-shot without External Wound.*—Dr. F. Ogston (*Edin. Med. Jour.*, 1884) relates an instructive case of death from a suicidal pistol-shot, in which there was no external wound. The bullet penetrated the velum palati, passed through the basilar process of the occipital bone, traversed the medulla oblongata, and, striking the internal occipital protuberance, passed forwards and upwards through the brain till it reached the frontal bone. It then sank backwards over the surface of the brain, and was found over the fissure of Sylvius, near the superior longitudinal sinus.

3489. *Reid on the Application of Dentistry to the Detection of Crime.*—Mr. Robert Reid (*Journal of the British Dental Association*, Sept. 1884) enlarges upon this subject, and publishes an instructive case of murder. The room where the murdered man had been struck down was strewn with detached portions of the upper jaw-bone, the largest of which extended from the second bicuspid on the left side to the canine tooth on the right, inclusive. The alveoli of the right and left upper laterals were occupied by left central and lateral incisors of the lower jaw. Among the detached teeth were right and left upper lateral incisors, corresponding exactly in shape and size with their fellows. On examination of the accused person, his central and lateral incisors of the left side of the lower jaw were found to have been recently removed, and the corresponding teeth removed from the jaw of the deceased were found to fit into the proper alveolar cavities of the accused.

3490. *Chittenden on the Significance of Absorption and Elimination of Poisons in Medico-legal Cases.*—Mr. R. H. Chittenden contributes a most suggestive paper (*Medico-Legal Jour.*, Vol. ii., p. 224) on this subject, in which he collates his own experiments with those of many other chemists. The memoir more especially deals with the proportion of arsenic met with in the various tissues and organs of the body, after its administration in the form of sodium arsenite and arsenious acid respectively. Though Mr. Chittenden's deductions will not perhaps meet with ready acceptance, and though they need verification, his paper nevertheless is a valuable contribution to toxicology, and a mine of facts. The chief conclusion at which he arrives is, apparently, that the administration of soluble arsenites results in a storage of arsenic in the brain—a result which does not follow the administration of arsenious acid, when traces only of the metal are found in the brain.

3491. *Silliman on Poisoning by Sodium Arsenate.*—Dr. B. Silliman (*Medico-Legal Jour.*, Vol. ii., p. 473) publishes a case of poisoning of a boy by a 'pest poison,' the acting ingredient of which was sodium arsenate, coloured with aniline dye; and the case is remarkable, inasmuch as the symptoms so much resembled those of belladonna poisoning, as for a time to entirely mislead. The child, aged 3 or 4 years, ate some of the poison (a pink powder); and when discovered, about a quarter of an hour later, he complained of sickness, then of thirst and nausea. He retched slightly, but did not vomit, although a considerable quantity of ipecacuanha was administered. These were the only signs of gastric irritation, and they rapidly subsided, giving place to neurotic symptoms. In from half to three-quarters of an hour from the poisoning he was in a state of profound stupor, from which it was impossible for a long time to arouse him. The pupils were widely dilated; the pulse 130, and small; the respirations 50 to 60 per minute, and shallow; and there was great muscular debility. After the free action of emetics, the vomited matters were found free from blood and mucus; and after the use of stimulants the boy revived. Two and a half hours after the powder was taken, the pupils were contracted to about the normal size; and the pulse and respiration had improved. Indeed, all danger seemed passed. Five hours later there was a relapse, and the patient became comatosed, collapsed, and died

eight and three quarter hours after the poison was taken. During the whole course of the case there was no complaint of pain, and there was no disturbance of the bowels. No necropsy was permitted.

3492. *Johnson on Poisoning by Canned Goods.*—Dr. John G. Johnson (*Medico-Legal Jour.*, Vol. ii., p. 53) publishes some interesting cases of poisoning by canned tomatoes (tinned tomatoes), where the symptoms observed in a family after partaking of the goods were those of severe gastro-enteritis, attended also with stupor and coma. Dr. Johnson alleges that the poisoning was one from chloride of tin and chloride of zinc, the latter substance having been used in soldering the tin. This supposition is improbable, and has excited considerable comment and discussion in New York. Dr. Johnson's statements were not confirmed by actual analysis, either of the contents of the tin or of the ejecta of the patients.

3493. *Lowndes on Syphilis after Rape.*—Mr. F. W. Lowndes (*Liverpool Med. and Surg. Jour.*, 1884, p. 299) publishes an instructive case of syphilis in a girl, aged 14, the result of a criminal assault by a man imbued with the superstition, common among the lower orders, that sexual intercourse with a virgin is a cure for gonorrhœal and syphilitic diseases.

3494. *Bage on Poisoning by Solanum Pseudo-capsicum.*—Dr. Charles Bage (*Australian Med. Jour.*, 1884, p. 297) relates a case in which a boy, 3 years old, ate in the afternoon some berries of the plant popularly known as the Jerusalem or winter cherry. Some castor-oil was given in the evening, but did not act well. Next day the boy was pale, and at 11 P.M., after preliminary twitchings of the extremities, had a violent general convulsion for several seconds. He then slept. Next morning the castor-oil was repeated, and some seeds of the plant were passed. In the evening the convulsions were renewed, more than forty-eight hours after the berries were eaten. When the boy was first seen by Dr. Bage at this time, the pupils were dilated, but not very widely. The teeth were clenched. There were signs of insufficient respiration, perhaps from spasm of the respiratory muscles; and there was occasional opisthotonos. The fits lasted about half a minute. The symptoms rapidly subsided under the influence of castor-oil, with bromide of potassium and chloral to allay spasm. The fruit of the above plant is commonly reported to be deleterious.

3495. *Forster on Boracic Acid as an Antiseptic.*—J. Forster (*Dingl. Polyt. Jour.*, No. ccli., p. 170) has experimented with the view of determining the action of boracic acid upon the animal system, and concludes that the use of boracic acid as a preservative for articles of food is a practice prejudicial to the digestive organs of those using such food. The boracic acid increases the excretion of nitrogen and solid matter in the fæces; and this is experienced when so small a quantity as seven or eight grains a day is ingested. This action is, moreover, in direct proportion to the quantity of the acid taken.

3496. *Kelp on Poisoning by Carbon Disulphide.*—Dr. Kelp (Friedreich's *Blätt. für Gerichtl. Med.*, 1884, p. 394) relates two cases of poisoning by the vapours of carbon disulphide. The patients, a male and a female, were workers in caoutchouc factories. In both cases neurotic symptoms, ending in insanity, were the prominent symptoms. These cases bear out the well-known views of Delpech as to poisoning by this substance.

3497. *Klein on Jequirity Seeds.*—Dr. E. Klein (*Interim Report to Local Government Board*, on the Relations of Septic to Pathogenic Organisms, March 21, 1884) has confirmed the experiments of Messrs. Warden and Waddell, that the active agent in poisoning by abrus precatorius is not a bacillus, but is, in all probability, a soluble ferment.

THOS. STEVENSON, M.D.

3498. *Ellenberger and Hofmeister on the Action of Copper on the System.*—Salts of copper in doses varying from half a gramme to three grammes were administered for some time to sheep, and it was noted that albumen, bile, and blood appeared in the urine, and that a general weakness and flaccidity of the muscles set in, as also a loss of appetite; but no alteration was visible in the respiration, or in the microscopic appearances of the blood-corpuscles or of the striated muscle-fibres. The copper was discharged chiefly by the bile, and in a less degree by the urine. When long administered, and particularly in small doses, the copper tends to accumulate in the liver, an organ which holds and retains it with great avidity. The pancreas also exhibits a great affinity for copper salts. Deposits of copper in the kidneys and in the nervous and muscular systems only occur to a slight extent. It is the opinion of many that copper should not be regarded as a poisonous metal, unless given in large quantities. The experiments of MM. Houlès and De Pietra Santa (*Acad. des Sciences*) tend to prove that copper is not a cumulative poison like lead, for no special trade disease has been noted in the case of workmen who passed twelve hours a day in the midst of an atmosphere of copper oxide; neither did they appear to enjoy any special immunity from infectious diseases.

3499. *Gerrard on a Test for Atropin.*—Gerrard (*American Jour. of Pharmacy*) gives the following directions. To a moderate dilute solution of atropin add a little mercuric chloride, dissolved (5 per cent.) in 50 per cent. alcohol; warm gently, and a yellow precipitate at once appears, which becomes brick-red on boiling. The atropin solution must not be too dilute, and the atropin must not be added to the mercuric chloride solution. The same reaction is given by hyoscyamin, daturin, duboisin, and homatropin. Other alkaloids, as a rule, give a white and not a red precipitate with this reagent.

3500. *Huber and Others on Poisoning from Bad Meat.*—The symptoms may set in a few hours after the ingestion of the food; or, between the infection and the appearance of symptoms, several days may elapse. In the former case, symptoms of the nature of cholera show themselves, such as excessive vomiting, colicky pains, diarrhœa, muscular cramps, and a low temperature. The vomiting and diarrhœa are succeeded by constipation. There may also be great excitability of the nervous system, and occasionally sleeplessness and delirium. On the other hand, where the symptoms are slow in showing themselves, the outbreak of the disease is attended by constipation rather than by vomiting and diarrhœa, the disturbances of the nervous system being chiefly noticeable. Some fever is present, soon followed by muscle cramps, hoarseness, and aphonia, laboured breathing with a sense of oppression in the chest, and violent palpitations of the heart. This slower form of the disease is more dangerous than

the other, and it is very liable to relapses attendant upon the slightest errors in diet.

3501. *Attfield on the Dangers of Canned Foods.*—Leffmann and Winter Blyth have respectively discovered dangerous amounts of tin dissolved in the case of preserved fruits that have been tinned for a considerable time. Drs. Ungar and Bodländer have noted the same thing in canned fruits and vegetables in Germany, the tin existing in the form of an insoluble stannous compound in the solid contents. On the other hand, Professor Attfield (*Jour. Pharm. Soc.*), after an experience of fifteen years, is of opinion that the public have not the faintest cause for alarm respecting the occurrence of tin, lead, or any other metal in canned foods. Unsoundness even in the preserved meat does not appear to promote the corrosion or solution of the tin; indeed, where canned food really does harm, this is most probably due to some fault in the food itself, for unsound food, whether tinned or untinned, is of course injurious to health. Small pieces of metallic tin, and globules of solder, are occasionally met with, but Dr. Attfield considers their presence as perfectly harmless. T. Cranstoun Charles, M.D.

3502. *Severi on the Length of the Large Intestine as a guide to the Age of the Fœtus.*—From an examination of 81 fœtuses, varying from the third to the ninth month, Dr. Severi regards the length of the large intestine as an important clue to the age. While the small intestine does not bear any constant relation to the length of the body, the large intestine is found to vary pretty definitely according to the length of the fœtus at different ages. Thus, from the third to the sixth month the great intestine is shorter than the fœtus; in the seventh month they are equal in length; and in the eighth and ninth months the large intestine is longer than the fœtus. After the first two years of extra-uterine life, during which the superior length of the great intestine is maintained, the disparity becomes gradually less, and a time arrives when equality is again reached. As the intestine varies in length according as it is distended or not, it is necessary to proceed on an uniform plan. Dr. Severi partially distends it on a table after its removal from the body and then cuts it into pieces about 45 to 50 centimètres in length. This facilitates the measurement.

3503. *Pellancani on the Structure of the Spermatic Cord.*—This elaborate paper, illustrated by microscopic sections, goes to show that the spermatic cord is an important aid in determining age.

3504. *Filomusi-Guelfi on Phosphorus-Poisoning.*—The author made a careful series of experiments on dogs, to determine certain points in regard to the poisonous action of phosphorus. In one group of experiments, the poison was injected under the pleura, to avoid its local action on the stomach and its speedy removal to the liver through the portal vessels; in another group of instances, to produce chronic poisoning, the digestive tract was chosen for its administration. Neglecting the lesions of the heart, of the intestines, and of the vessels, already known from the works of Wagner, Klebs, and Wagener, the author confined his researches to the liver, pancreas, salivary glands, and stomach. He concludes that in phosphorus poisoning there are—1, always an interstitial inflammatory process in the liver; 2, fatty degeneration in the salivary glands, which is said not to have been previously observed; 3, fatty degeneration with special changes in the pancreas and stomach. The interstitial inflammation of the liver, always found in phosphorus poisoning of a certain duration, is secondary to degeneration of the hepatic cells, as Cornil and Brault pointed out; and in this it differs from the ordinary hepatitis of alcoholism and malaria. In the pancreas and salivary glands, there is not merely a fatty infiltration, but an actual destruction of the cells. In the stomach, the fatty degeneration of the peptic glands (phosphoric glandular gastritis of Virchow) and of the muscular fibres was due to the general action of the poison, not, as Munk and Leyden asserted, to its local and irritant action. Perforation of the stomach following hæmorrhagic infarct is explained by the fatty degeneration of the vessels and of the tissues in which they run, by alteration in the blood, and by the digestive action of the gastric juice. In the kidney, fatty degeneration of the epithelium and changes in the glomeruli were observed.

3505. *Bufalini on Poisoning with Hydrocyanic Acid.*—The author, from experiments on dogs and rabbits, concludes that hydrocyanic acid at first stimulates the functional activity of the respiratory centre; and then abolishes it. The cardiac movements continue for some time, the heart dying last. The absorption of the poison is only slightly, if at all, delayed by section of the sensory nerves of the mucous membrane to which it is applied.

William R. Huggard, M.D.

3506. *Vysokovitch on a Case of Fish-poisoning.*—Dr. Vysokovitch, of Dr. V. P. Kryloff's laboratory, furnishes details (*Vratch*, No. 26, 1884) of the necropsy in a case of poisoning by salted fish of a small variety, which terminated fatally on the second day after the ingestion. As in Dr. Tchugin's cases (in the London Medical Record, May 1884, p. 217), there were found an extensive ecchymotic inflammation of the gastro-intestinal tract, and an enlargement of the solitary follicles, as well as minute hæmorrhages in the scalp. Histological examination detected masses of bacilli and spores in the stomach and bowels; some of the micro-organisms showed serpent-like movements. Judging from the form of the fungi, and from the phenomena which were developed in mice after injecting contents of the patient's stomach, the author thinks that the micro-organisms, to which he ascribes an etiological part in this case, are identical with the *vibrion septique* of Pasteur.

3507. *Khardin on Changes in the Nervous Centres in Poisoning by Carbonic Oxide.*—Dr. V. N. Khardin, of Samara, publishes (*Vratch*, Nos. 31 and 32, 1884) the results of his experiments on dogs, carried out at Professor T. P. Mierzejewski's laboratory in St. Petersburg. In chronic cases of poisoning by carbonic oxide he found a diffuse inflammatory process, characterised by migration and perivascular accumulation of leucocytes by degeneration of the cellular elements of the nervous tissue, changes in the interstitial substance, degeneration of nerve-fibres, and appearance of plasmatic exudation. In cases of repeated poisoning of short duration, there was observed only incipient parenchymatous alteration in some of the nerve-cells. V. Idelson, M.D.

3508. *Davidson on Poisoning by Pois d'Achery.*—Drs. Davidson and Stevenson, in the *Practitioner*, June 1884, p. 435, contribute a paper on the poisonous properties of a species of bean cultivated in Mauri ius, and known as the Pois d'Achery (*Phaseolus lunatus*, Linn.). There are two varieties—the white bean, which is considered wholesome, whilst

those that are variegated on the surface are regarded as poisonous. The active agent is hydrocyanic acid, which does not exist ready-formed in the beans, but is created when they are macerated, by a process similar to that by which the same poison is formed from the bitter almond and the cherry-laurel. The symptoms produced by eating the cooked beans differ but little from those ordinarily produced by hydrocyanic acid, except in the slowness of their commencement and progress. Illustrative cases are given which show the long continuance of the symptoms.

3509. *Addinsell on a Case of Poisoning by Sardines.*—In the *Lancet*, Sept. 1884, p. 540, Mr. Addinsell reports a case of poisoning by sardines. On June 7, about 3 P.M., a lady partook of four sardines for luncheon; the box had been opened some days, and a small white speck was noticed on one or two of them, but the fish seemed fit to eat. About 4.30 P.M. the patient was seized with vomiting and diarrhœa. At 7 P.M. Mr. Addinsell found her in a state of collapse, the temperature subnormal, the pulse extremely feeble, and great feeling of thirst. Three minims of morphia were injected hypodermically, and a drachm of brandy with a little ice was given by the mouth. This was quickly ejected. The evacuations now consisted of blood and mucus, but were less frequent. About 9 P.M. half a pint of rice water, with an egg beaten up with some ice, was given, and by 11.30 P.M. the pulse at the wrist was distinct. During the night the patient slept fitfully, vomited twice, and had three motions. Seventeen hours after first being seen, the temperature was normal, and the pulse fairly good; and recovery was rapid. Richard Neale, M.D.

MEDICAL CHEMISTRY.

RECENT PAPERS.

3510. Baumann.—The Estimation of Iodine in Urine. (*Zeitschr. für Physiol. Chemie*, Band viii., Heft 4.)

3511. Petri.—The Behaviour of Aldehyde, Grape-Sugar, Pepton, Albumins, and Aceton towards Diazobenzolsulphonic Acid. (*Zeitschr. für Physiol. Chemie*, Band viii., Heft 4.)

3512. Baumann.—Cystin and Cysteïn. (*Zeitschr. für Physiol. Chemie*, Band viii., Heft 1.)

3513. Brieger.—The Separation of Aromatic Ether Sulphates from the Urine. (*Zeitschr. für Physiol. Chemie*, Band viii., Heft 4.)

3514. Von Jaksch.—Peptonuria.

3515. Duclaux.—Milk. (*Comptes Rendus*, Tome xcviii.)

3516. Brieger.—Putrefaction Alkaloids. (*Berichte der Chem. Ges.*)

3517. Otto.—Pancreatic Digestion of Fibrin. (*Zeitschr. für Phys. Chem.*, Band viii.)

3518. Schotten.—The Source of Hippuric Acid in the Urine. (*Zeitschr. für Phys. Chem.*, Band viii.)

3519. Hoppe-Seyler.—Indigo-forming Substances in the Urine. (*Zeitschr. für Phys. Chem.*, Band viii.)

3520. Plósz.—On Urinary Pigment. (*Zeitschr. für Phys. Chem.*, Band viii.)

3521. Bubnow.—Chemical Constituents of the Thyroid Gland. (*Zeitschr. für Phys. Chem.*, Band viii.)

3522. Transformation of Nitrites in the Organism. (*Zeitschr. für Phys. Chem.*, Band viii.)

3523. Zeller.—The Fate of Iodoform and Chloroform in the Organism. (*Zeitschr. für Phys. Chem.*)

3524. Gréhant and Quinquaud.—Urea in the Blood. (*Gaz. Hebd. de Méd. et de Chir.*, No. 13, 1884.)

3525. Werner.—On Globulin in the Urine of a Case of Acute Nephritis. (*Deutsche Med. Wochensch.*, No. 46, 1883.)

Art. 3510. *Baumann on the Estimation of Iodine in Urine.*—For some time past, A. Zeller has been pursuing a series of researches on the absorption and fate of iodoform in the organism. A short time ago, E. Harnack published a criticism on Zeller's work, calling his methods in question. These, it appears, were—(1) Hilger's method of iodine estimation, in which a measured quantity of palladium chloride solution of known strength was added to the acidified urine containing the potassic iodide, until all the palladium was precipitated; (2) Kersting's method, in which the iodine holding urine is distilled with strong sulphuric acid, and the distillate after saturation with potassic chloride titrated as in the preceding method; and (3) estimation of the iodine as silver iodide. Professor Baumann (*Zeitschr. für Physiol. Chemie*, Band viii., Heft 4) defends Zeller's proceedings and results, and considers Harnack's criticisms as devoid of a shade of authority.

3511. *Petri on the Behaviour of Aldehyde, Grape-sugar, Pepton, Albumins, and Aceton towards Diazobenzolsulphonic Acid.*—Diazobenzolsulphonic acid gives an intense colour reaction with grape-sugar and peptons in alkaline solutions. This reaction has already been described as a new general aldehyde reaction. Dr. Petri (*Zeitschr. für Physiol. Chemie*, Band viii., Heft 4) has made the interesting discovery that the reddish-brown pigment which peptons and weak albumin solutions yield with diazo-acids can be transformed into a beautiful fuchsin-red body that is probably identical with the grape-sugar aldehyde pigment. 1. *The Grape-sugar Aldehyde Reaction* is thus obtained. The grape-sugar is dissolved in a dilute alkali, and treated with an alkaline solution of diazobenzolsulphonic acid. In ten to twenty minutes a beautiful magenta red shows itself. The presence of a fixed alkali is necessary, and the careful application of heat hastens its appearance. With one of the aldehydes of the fatty series, the same reaction appears; but the quantity of the aldehyde must not be large, nor the alkali too strong. The aromatic aldehydes, as Penzoldt and Fisher have also found, likewise manifest the reaction after being reduced with sodium-amalgam; the employment of the same body also accelerating the appearance of the colour reaction in the case of the fatty aldehydes and of grape-sugar. The solutions obtained are of a magenta colour, with a light bluish tint; and a rosy-red foam forms when they are shaken, especially with a moderate dilution. Chlorine, bromine, iodine, sulphurous acid, and nitrous acid rapidly destroy the colour; and the colour can likewise be removed by the action of reducing agents when the air is excluded, but it returns again on the admission of oxygen. 2. *The New Pepton and Albumin Reaction.*—If peptons or other albumins be dissolved in water and treated with the above diazo-acid, only a weak yellow coloration ensues; but if we add to the solution ammonia or a fixed alkali, after concentration an orange yellow to a deep brownish red colour appears. The reaction is shown with greatest intensity if we treat a concentrated alkaline pepton solution with a freshly prepared alkaline solution of the diazo-acid; the colour then obtained is of a deep brownish red,

with a blood-red foam on shaking. Serum, or egg-albumin, and casein, all give a yellow to an orange colour, not so intense as with the pepton. Transparent solutions show a sharply defined absorption band betwen B and C. By the employment of such a reducing agent as sodium-amalgam, with the simultaneous passage of a current of carbonic acid gas, the above colour reaction gradually gives place to an intense magenta coloration, which spectroscopically and in its behaviour towards acids and alkalies is not to be distinguished from the aldehyde reaction already described. It would therefore appear that the different sugars, peptons, and albumins, apparently without a very great invasion or alteration of their molecule, furnish equally the characteristic aldehyde reaction. The peptons and albumins resemble the aromatic aldehydes in their behaviour, in that they both give the distinguishing colour reaction in presence of such a reducing agent as sodium-amalgam. Aceton in a watery solution gives a deep red reaction with an alkaline solution of the diazo-acid, but there is a want of the bluish opalescence, and no clearing up of the spectrum towards the blue end.

3512. *Baumann on Cystin and Cysteïn.* — E. Baumann (*Zeitschr. für Physiol. Chemie*, Band viii., Heft 4) says that the mercapturic acids that appear in the animal organism after the introduction of chlorine-, bromine-, or iodine-benzol, or of certain other aromatic substances, when boiled with mineral acids are resolved into acetic acid and bodies of weakly basic properties, which stand in the closest relation to cystin. Kultz's recent analyses of cystin give to it the formula $C_3H_6NSO_2$, instead of $C_3H_5NSO_2$ or $C_3H_7NSO_2$. If cystin be dissolved in hydrochloric acid and some tinfoil then introduced, a solution of the latter occurs, and a reduction-product of the cystin, a new basic body, cysteïn, is obtained. After the evolution of gas has ceased, the solution is diluted, treated with hydric sulphide, and the filtrate evaporated to dryness. The hydrochloric acid salt of the new base is thus obtained. An alcoholic solution of this, carefully neutralised with ammonia, gives a fine-grained crystalline precipitate, which last is easily soluble in water, in ammonia, and in acetic or the mineral acids. But only in acid solutions or in the dry state is it permanent; for watery solutions soon give on standing in the air crystals of insoluble cystin, although the same solutions, if air be excluded, will remain unaltered. The alkaline solutions also quickly change. But this base is especially characterised by its behaviour towards ferric chloride, with which its watery solution gives a beautiful indigo blue coloration, which, however, rapidly disappears, cystin being deposited in its characteristic crystals. The new base, which Baumann names cysteïn, can easily be obtained if the alcoholic solution of the hydrochlorate salt be exactly neutralised with ammonia, and the precipitate, after being washed with alcohol, quickly dried *in vacuo*. The white crystalline powder obtained differs from cystin in its crystalline form, and in its solubility in water and in acetic acid; and it apparently has the composition $C_3H_7NSO_2$, formerly ascribed to cystin itself. Its polarising powers also are much less than those of cystin.

3513. *Brieger on the Separation of Aromatic Ether Sulphates from the Urine.* — Professor Brieger (*Zeitschr. für Physiol. Chemie*, Band viii., Heft 4) says that, in addition to Baumann's method, the following may often be advantageously employed. Fresh urine is treated with neutral acetate of lead to complete precipitation; to the filtrate basic acetate of lead is next added in excess, and from the filtrate of the last all the lead is precipitated with hydric sulphide. This final filtrate is evaporated to dryness, and left some time *in vacuo*. The residue is then digested with much hot absolute alcohol, and the crystals remaining behind boiled with hydrochloric acid and barium chloride; an abundant precipitate of basic sulphate is obtained. A solution of the crystals when treated with bromine water gives a precipitate, which in a short time crystallises as tribromphenol.

3514. *Von Jaksch on Peptonuria.*—Von Jaksch found pepton in the urine in 76 out of 354 cases examined, in 72 of which there was inflammation or accumulation of pus, in 3 scurvy, and in 1 phosphorus poisoning. With Hofmeister, he thinks that the pepton is contained in the pus-corpuscles, and not in the serum. Where no pus is present, he believes that, from the increase of the white corpuscles, as well as of the products of their destruction in the blood, the pepton is set free from these corpuscles and excreted by the kidneys. It is possible that the appearance and course of peptonuria may be of use in determining the beginning and ending of the absorption of inflammatory products.

3515. *Duclaux on Milk.*—According to E. Duclaux (*Compt. Rend.* Tome xcviii.) the albuminoid matter in milk may be divided into colloidal casein, casein in suspension, and soluble casein. In a sample of milk these results were obtained.

	Suspended.	Dissolved.
Fat	3·32	—
Sugar	—	4·98
Casein	3·31	0·84
Calcic phosphate	0·22	0·14
Inorganic salts	—	0·39

The soluble casein is rarely present in such a high proportion, however. This soluble casein is only slightly affected by the action of heat, but the other two varieties are coagulated. Slight acidity of the milk causes some of the colloidal casein to pass into the suspended form, while slight alkalinity has a converse effect. The proportion of soluble casein in normal milk remains approximately constant, seeming also not to be affected by the nature of the milk, and being sensibly the same in the milk of cows, goats, asses, and women. Hammarsten supposed that, when rennet acted on milk, the casein was split into two new albuminoids, one insoluble in the presence of calcic phosphate, and carrying down with it a portion of this phosphate, and the other, called whey-protein or lacto-protein, remaining in solution. The author obtained the following results on treating milk with rennet free from diastatic 'casease,' the access of bacteria being prevented as far as possible.

	Suspended.		Dissolved.	
	Milk.	Whey.	Milk.	Whey.
Fat	4·30	0·85	—	—
Sugar	—	—	5·37	5·73
Casein	3·53	0·46	0·37	0·36
Calcic phosphate	0·23	—	0·17	0·17
Inorganic salts	—	—	0·40	0·43
	8·06	1·31	6·31	6·69

The above, it will be seen, does not confirm Hammarsten's supposition, since the amount of soluble casein is not increased, and the calcic phosphate takes no active part in the formation of the curd. From the table it further appears that 0·46 of the colloidal casein has not solidified ; and that the whole of the coagulable casein is never precipitated. Milk, the author regards as a system in which the three varieties of casein are in equilibrium ; this, however, being disturbed by the addition of inorganic salts and ferments, &c. Its coagulation would, therefore, appear to be a problem that cannot at present be solved.

3516. *Brieger on Putrefaction Alkaloids.*—Brieger (*Berichte der Chem. Ges.*) finds that in the putrefaction of flesh, cholin is converted into the more poisonous neurin, a subcutaneous injection of 0·04 gramme of neurin hydrochloride being fatal to a rabbit weighing 1 kilogramme, but 0·5 gramme of the cholin salt being required to produce the same result.

3517. *Otto on the Pancreatic Digestion of Fibrin.*—J. G. Otto describes his experiments in the *Zeitschr. für Physiol. Chem.*, Band viii. Finely divided fibrin was digested with a watery solution of ox pancreas, ether being added to prevent putrefaction. The first decomposition-product, globulin, was separated by saturation of the filtrate with magnesium sulphate. When examined, this globulin corresponded very closely with Hammarsten's and Fredericq's serum-globulin. The hemialbumose or propepton was next obtained by saturating with sodic chloride, and adding hydrochloric acid. This body agrees in its characters and composition with the propepton formed in gastric digestion. To obtain the pepton itself, the two previous bodies are best separated by acidifying slightly with acetic acid and then boiling with sodic acetate and ferric chloride ; to the filtrate strong sulphuric acid is added, and then phosphotungstic acid, by which the pepton is precipitated. This precipitate is first decomposed with caustic baryta, baryta water added till a decided alkaline reaction is obtained, and carbonic acid gas next passed for some time through the solution. The purified pepton obtained gave this percentage composition : ash, 0·3–0·6 ; carbon, 50·0 ; hydrogen, 6·81 ; nitrogen, 15·83 ; sulphur, 1·06. This agrees closely with Kossel's analysis of gastric pepton ; its specific rotatory power is 65·2–66, that and gastric pepton being 63·5 (Hofmeister). A large proportion of the pepton thus formed is converted into antipepton when subjected to further digestion.

3518. *Schotten on the Source of Hippuric Acid in the Urine.*—Salkowski (*Zeitschrift für Physiol. Chem.*, Band viii.) has obtained phenylpropionic acid from the decomposition of proteids, and has shown that in the living organism it is converted into benzoic acid, which by combining there with glycocoll forms hippuric acid. C. Schotten, in experimenting with (α) amidophenylpropionic acid, did not obtain an increase in the hippuric acid, and he does not therefore regard it as a source. Amidophenylacetic acid is converted into mandelic acid in the organism ; the latter is not changed into hippuric acid, but is excreted in the urine unchanged.

3519. *Hoppe-Seyler on Indigo-forming Substances in the Urine.*—J. Hoppe-Seyler (*Zeitschrift für Physiol. Chem.*, Band viii.) obtained 1 gramme of crystallised indican from 25 litres of normal dogs' urine, in which it exists in sufficient quantity to be detected by Jaffe's reaction. To determine if indican undergo any change in the organism, 2·7 grammes were injected into an animal, but in the urine indican only was found. No increase was caused in its elimination by the injection of orthonitrocinnamic acid, or of orthonitrobenzaldehyde alone, or together with aceton.

3520. *Plósz on Urinary Pigment.*—P. Plósz states (*Zeitschrift für Physiol. Chem.*, Band viii.) that, when urine is boiled some time with hydrochloric acid, it becomes darker in colour, and indigo frequently separates out in twenty minutes or so. When the coloured urine is shaken with ether, a red pigment is obtained, which the author names urorubin. To purify it from the benzoic acid and urobilin mixed with it, the ether is distilled off, the residue washed several times with hot water, again dissolved in ether, and finally extracted with dilute soda-ley. The urorubin can be obtained in crystalline plates by the careful evaporation of its solution in alcohol or ether. It is soluble in alcohol, ether, and chloroform, forming garnet-red coloured solutions, but it is insoluble in water ; it is also slowly dissolved and decolorised by strong hydrochloric and sulphuric acids, and more rapidly by nitric acid and the alkalies. Urorubin is probably derived, like indican, from decomposition in the intestine. The dark colour, which still remains after the exhaustion of the urine with ether, may be removed by extraction with amylic alcohol. On evaporating this alcoholic extract, a dark pigment of the nature of urrhodin or uromelanin is obtained.

3521. *Bubnow on the Chemical Constituents of the Thyroid Gland.*—Bubnow (*Zeitschrift für Physiol. Chem.*, Band viii.) first gives a long summary of the previous literature on this subject. In his watery extracts the author obtained xanthin, hypoxanthin, and lactic acid, but no guanin. The proteids he obtained by extracting with sodic chloride solution (10 per cent.) and caustic potash solution (0·1 per cent.) were sensibly the same in the glands of men and of oxen ; the proteid extract, however, by the sodic chloride solution was higher in carbon, but lower in nitrogen, than that extracted by the potash solution.

3522. *Transformation of Nitrites in the Organism.*—In the *Zeitschr. für Physiol. Chem.*, Band viii., it is stated that benzonitril is eliminated partly by the lungs, fæces, and urine, and that its odour is perceptible in the respired air for nearly a week after a dose of 2·4 grammes. It is poisonous in its action, producing convulsions, and sometimes also ulceration of the mucous membrane of the stomach. In large doses it causes death from paralysis of respiration. Here the sulphates were diminished in the urine, and the ratio between the mineral and combined acids was altered from the proportion of 9·1 to 0·12 to 1. Phenylacetonitril acts as a violent poison, and the urine becomes strongly acid, containing albumin, and a great excess of urates and uric acid. Acetonitril is the least poisonous. Propionitril causes violent vomiting ; it is very poisonous, and part of it is eliminated by the lungs unchanged, and one-tenth or so by the urine as propionic acid. Crystals of triple phosphate in great numbers were uniformly present in the urine, while the animals were under the influence of the nitrites.

3523. *Zeller on the Fate of Iodoform and Chloroform in the Organism.*—A Zeller (*Zeitschr. für Physiol. Chem.*) has shown that iodoform may produce fatal results if applied to the peritoneal walls, its excretion being much slower than its absorption, and a consequent accumulation of iodine occurring

in the blood and tissues. Högyes believes the absorption to be due to the decomposition of the iodoform with the formation of a compound of iodine and albumin. Zeller is of the same opinion. After the administration of chloroform, part of it is found in the urine a few hours later. According to Nothnagel, bile-pigments are also present, but this has not been found always to be the case by Kappeler. The chlorides are found by the author to be increased, this increase lasting for several days, when chloroform is given enclosed in capsules ; and about one-third of it appears to be exhaled by the lungs.

T. Cranstoun Charles, M.D.

3524. *Gréhaut and Quinquaud on Urea in the Blood.*—The conclusions arrived at by the authors. are thus summed up by the *Gaz. Hebdom. de Méd et de Chir.*, 1884, No. 13. 1. The venous blood, returning from the head or limbs, contains no more urea than the arterial blood conveyed to these parts ; consequently, any urea from these must be carried away by the lymphatics. 2. Blood which has passed through the spleen or liver contains more urea than arterial blood ; the difference is greatest during digestion, and the quantity of urea may reach 9 milligrammes in 100 cubic centimètres of blood.

J. S. Kaeser, M.D.

3525. *Werner on Globulin in the Urine in Acute Nephritis.*—Many observers (Lehmann, Virchow's *Archiv.*, Band xxxvi., p. 125 ; Gerhardt, *Deutsche Archiv*, Band v., p. 212, 1869 ; Edlefsen, *Ibid.*, Band vii., p. 67, 1870 ; Senator, Virchow's *Archiv*, Band lx., p. 476, 1874) have noted the presence of globulin together with albumen in the urine of cases of nephritis. In the case of a boy of 5½ years with nephritis due to cold, Werner (*Deutsche Med. Wochensch.*, Band 46, 1883) observed urine containing only globulin. The method used was that of Hammarsten, precipitation with magnesium sulphate. No necropsy was made. He thinks this case supports the view of Senator, that the globulin in these cases does not come directly from the blood, but from the epithelium of the tubules, which rapidly necroses.

Robert Saundby, M.D.

REVIEWS.

Article 3526.

Elements of Surgical Diagnosis. By A. Pearce Gould, M.B., M.S. Cassell & Co., 1884.

This is the work of a sound observant surgeon, and will, we think, be deservedly popular. The author is clear and forcible in his language, and the work is simply and practically arranged. We recognise the difficulty of handling so large and important a subject as surgical diagnosis, and anticipate the danger of its degenerating into a mere examination of possible diseases and injuries of different regions ; or, on the other hand, an attempt to be mathematically precise. These dangers the author has carefully avoided. The descriptions of morbid and other abnormal conditions are as complete as the limits of a manual of nearly six hundred pages can allow, and time and space are not taken up by the discussion of unnecessary details of pathological processes which the larger text-books should afford. The author avoids comparative tables of symptoms in allied diseases, and does not set down a numbered list of definite symptoms for the different morbid conditions a student has to recognise. Moreover, he goes so far as to exclude illustrations from the work, and refers to only one other work for the microscopical examination of tumours. In this limitation of reference we think the author has erred, for the student could find equally valuable directions and descriptions in other surgical works which he may possibly possess or have the means of referring to.

In the introductory chapter the author gives some sound practical advice, sometimes perhaps in too technical language for a commencing student, but the substance of it is excellent. He appears to limit the dyscrasiæ, however, to five—syphilis, gout, cancer, struma, and hæmophilia. This is not so philosophical as the system recently propounded by Mr. Jonathan Hutchinson, and, we think, might be amended. We think, too, that the section on 'Examination of the patient' might with advantage be enlarged. Certainly good directions are given in the appropriate places for the special examination of parts and limbs, but we feel that a student beginning his work in the out-patient room, or in the wards, or in the country, might receive valuable help in the outset of his work by fuller directions about the examination of a patient, the importance of thorough light, and the use of the special senses.

After five-and-twenty pages of general remarks—which are only too short, but are really excellent—the author devotes two short chapters to general diagnosis of injuries, then one chapter to the constitutional effects and complications of injuries, and after these seventy-five pages, he takes seriatim the injuries of the different regions of the body, beginning with the head. These are admirably discussed, and the author shows a broad grasp of his subject, and is very systematic and practical in his observations. Over-refinement of diagnosis is avoided, but the necessary indications for coming to a correct conclusion are given. We think the author particularly happy in the treatment of the subject of injuries, and difficulties are fully pointed out where they exist in diagnosis. The simple fractures of the forearm and leg are carefully given, and the obscure injuries at the elbow and hip-joint are equally well led up to. We notice that in small practical details of observation the student will find valuable help in this book, and the practitioner will gain many valuable hints.

We are inclined to notice what appears to us an over-estimation of instrumental aids to research at p. 121, where, in discussing the diagnosis of foreign bodies in the œsophagus, the author says that examination by the finger 'is imperfect in result and disagreeable to the patient. A better plan is to trust to the eye.' Then follow directions to use the laryngoscope ; or, if the body be below the orifice of the larynx, 'as it usually is, the œsophagoscope' is recommended. The simple use of the probang is referred to afterwards. Surely it would have been more practical to have referred to the simpler instrument first ; and is the use of the finger so imperfect in results ?

The diagnosis of disease is kept separate from that of injury, and usefully so, we think. The first five chapters are devoted to the general diagnosis of tumours and swellings of various kinds, fluctuating, pulsating, and affecting bones. Then follow chapters on ulcers, sinus, fistula, and gangrene. After this comes regional diagnosis of disease, beginning at joints, and the last two hundred pages and more are occupied with this important subject.

It is not easy to do justice to the amount of care shown in the handling of so difficult a subject and one of such vast extent as the diagnosis of surgical diseases; but we have found so few omissions, and so few occasions for criticism, that the manual has proved a pleasure to peruse. It may be worth while for the author to consider whether a student's manual of surgical diagnosis might not with advantage contain a few pages devoted to case-taking, with a scheme for the use of students, and with figure outlines for a guide to that delineation of disease or injury which a very limited power of sketching so materially helps.

W. W. Wagstaffe.

Article 3527.

Atlas of Nerve-Distribution of the Surface of the Body. By Dr. Jacob Heiberg, Christiania. Alb. Cammermeyer. 1884.

Atlas der Hautnervengebiete. Von Dr. Jacob Heiberg.

Dr. Heiberg has produced a very practical atlas for practitioners and students upon a rather novel plan, which will attract attention. The areas of particular nerve-supply are indicated by different colours, and the names of the nerves are clearly shown by being printed on the different areas. In this way can be seen at a glance the distribution of cutaneous branches from a particular source.

We do not think the author has done sufficient justice to his own work in the preface, for he might have pointed out the practical bearing of such an atlas on clinical studies and in the ordinary cases of a practitioner's experience. Not only in neuralgia, but in other pathological affections of the skin and immediately subjacent parts, is such a knowledge of nerve-limitation of value, and we may be able to trace back to its source an affection which seems a limited surface-affection by noticing the distribution of the nerve-supplies as shown in an atlas of this kind.

In other countries, a somewhat different nomenclature is often adopted from that which we employ; and the author wisely gives on a page of remarks facing each plate the synonyms of the various nerves he mentions. These will make the plates of much more general usefulness. It is certainly much easier to follow the distribution of cutaneous nerves on these plates than by the intricate delineations of nerve branches usually given by authors. The limits are, no doubt, made somewhat too precise, but this objection must apply to any delineation of nerves, and it is only the description in the text which can correct this. The authority of recognised authors has been followed generally, and we quite believe the author when he maintains that he has verified all the limits of nerve-distribution he has depicted. But the network of contiguous nerves makes it often difficult to assign a limit, and we cannot but think he has occasionally made the distribution appear different from what is most commonly found. This strikes us most in Plate VII., where the front and back of the hand are shown. Here the palmar surface of the ring finger, and this only, is made to be supplied in part by the radial, while the whole of the dorsal surface of the last two phalanges of the index and middle fingers, the radial side of the corresponding part of the ring finger, and part of the top of the thumb, are made to be supplied by the median, and apparently by the median alone.

The author, with judgment, avoids saddling his plates with a quantity of description which can be got from text-books, and gives only a few general remarks and a list of synonyms on a page facing each plate. There are ten of these plates, and they are admirably drawn and coloured. And the size of the book—crown octavo—combined with the excellence and clearness of the plates, make the work one of real usefulness to the teacher, the student, and the practitioner. Professor Heiberg apparently uses a large figure with similar colouring of nerve-areas for class purposes, and we recommend this plan to English teachers of anatomy as likely to be useful.

W. W. Wagstaffe.

Article 3528.

Prostitution under the Regulation System, French and English. By Yves Guyot, Member of the Municipal Council of Paris. Translated by Edgar Beckit Truman, M.D., F.C.S. Pp. 348. London: George Redway. 1884.

This 'study in social physiology,' though hardly a medical work in the strict sense of the term, deserves notice for two reasons—because it has been translated by an English medical man, and because it is calculated to mislead English readers who may be content to accept M. Guyot's guidance in the matter of the Contagious Diseases Acts.

The book is dedicated to Mrs. Josephine Butler, and it deals for the most part with the French and English laws relating to prostitution and the prevention of contagious diseases; but the laws of other countries are also laid under contribution when they offer anything likely to aid M. Guyot in his object, which appears to be the wholesale condemnation of all legislation whatever of the kind in question. Now it is clear that conclusions based upon evidence extracted from the different codes of various countries cannot be of any value as regards any one country, even supposing all the evidence to be strictly accurate. But in the case of England—and it is only with the parts of the book that relate to this country that we need concern ourselves—the evidence is not accurate. For example, in his abstract of the Contagious Diseases Acts M. Guyot omits altogether one of their most important and distinguishing provisions—namely, that (Act of 1866, sect. 12) 'A hospital shall not be certified under this Act unless at the time of the granting of a certificate adequate provision is made for the moral and religious instruction of the women detained therein under the Act,' &c. On this point the last Select Committee of the House of Commons state, in their report published in 1882, 'Your committee are satisfied on the evidence placed before them that the moral and religious influences brought to bear in the certified hospitals are largely productive of reclamation.' Further, M. Guyot says (p. 108), 'In England, as soon as an agent has good reason to believe that a woman is a prostitute, he may arrest her. This power has been the occasion of several tragedies.' That this is not the case is evident from the following extract from the Act of 1869, sect. 4, 'Where an information on oath is laid before a justice by a superintendent of police, charging to the effect that the informant has good cause to believe that a woman therein named is a common prostitute, &c. . . . . the justice may, if he thinks fit, issue a notice thereof to such woman,

which the superintendent of police shall cause to be served on her.' This, of course, is totally different from the power of arrest being in the hands of an 'agent,' as M. Guyot asserts. Again, as regards what M. Guyot calls 'tragedies,' we need only refer again to the report above mentioned, in which the committee, after investigating various cases in which it was alleged that an attempt had been made to bring women improperly under the operation of the Acts, remark that they 'are not satisfied that in a single case the action of the police has been marked by the carelessness and misconduct somewhat recklessly attributed to them. Even when the summonses have been dismissed by the magistrates, the cases appear to have warranted reasonable suspicion, or to have been surrounded by doubt, the benefit of which was naturally given to the woman summoned.' The investigation of one case, known as the Dover case, of which M. Guyot makes much, occupied more than three days, and the Committee came to the conclusion that the conduct of the police was not open to censure. The Committee sum up this part of their inquiry with the opinion 'that the charges of misconduct brought against the police have broken down, and they desire to record their concurrence in the opinion unanimously expressed by the Royal Commission, "That the police are not chargeable with any abuse of their authority, and that they have hitherto discharged a novel and difficult duty with moderation and caution."'

It is unnecessary to follow M. Guyot further. Enough has been said to show that he is not a trustworthy guide on that part of his subject which relates to this country; and it seems desirable that this fact should be pointed out, although the Acts at the present time are useless or worse, owing to the suspension of the most important clauses.

Finally, to convey some idea of the general tone and style of this curious work, the following quotation (from p. 214) will be sufficient:—'These doctors are no more than machines for introducing specula into the parcels of flesh that the police put before them. Custom House officers of syphilis, they forget that these women have nerves and a brain, that they suffer and feel, and they inspect them like so much trichinous meat.'

It is only fair to add that some doubt as to the propriety of using one word in the above passage appears to have occurred either to the author or to the translator, for on a slip containing errata we read 'delete trichinous.'

ARTHUR COOPER.

ARTICLE 3529.

A Practical Treatise on Disease in Children. By EUSTACE SMITH, M.D., F.R.C.P., Physician to the East London Children's Hospital, &c. London: J. & A. Churchill. 1884.

THE author makes in his preface the usual modest apology for his book; but none was really needed. Dr. Eustace Smith must be congratulated upon this result of his manifold and conscientious labours. His work is not a mere adaptation of Rilliet and Barthez, nor is it a servile copy of the Germans, or a rule-of-thumb treatise in the old style. It is, as every page bears witness, the outcome of close observation, original research, extensive experience and sound common-sense.

The book begins with a valuable introductory chapter, in which are described the best method of examining children, the manner in which symptoms are masked or modified in childhood, the tolerance, or the reverse, of the infant for the various drugs, &c. In speaking of the temperature, the case is given of a girl, aged 12, who had been kept in bed for five weeks on account of a regular evening temperature of about 100°. Finding nothing else to account for it, and having met with similar instances before, the author attributed it to rapid growth, and recommended with good effect that no notice be taken of it. The body of the work treats systematically of the various diseases to which children are subject; but for those ailments which present the same features as in the adult, the reader is referred to the ordinary text-books of medicine. This is a very sensible course to pursue; but we venture to suggest that a few words upon the relative frequency with which these diseases affect children would have been welcome. Under the head of 'Chronic Bright's Disease,' Dr. Eustace Smith lays great stress upon the inelasticity of the skin as an indication of imperfect excretion of urea, and in infants, from the difficulty in getting a sample of the urine, the symptom is obviously of great value. The chapters on 'Congenital Heart-disease' and 'Cerebral Tumours' are remarkable for clearness of exposition and exhaustive treatment; and the purely clinical chapters, such as those on the urine, on the examination of the chest, and on paroxysmal dyspnœa, will be found full of useful hints. In the case of the last, however, we question whether the direct pressure upon the tubes of rapidly growing bronchial glands will explain the sudden supervention of acute dyspnœa; we prefer to regard the spasmodic element as a factor in its production. The author evidently, and with justice, regards the index as a matter of prime importance, for he devotes to it no less than 33 pages. It is indeed a perfect model of what an index should be, and we recollect no instance of one so systematic and complete. In conclusion, we have no hesitation in predicting for this book a brilliant success in England and America, and an importunate demand for its translation into French and German.

ARTICLE 3530.

Conférences sur les Maladies des Enfants. Par le Dr. JULES SIMON, Médecin de l'Hôpital des Enfants Malades. Tome II. Paris: Delahaye & Lecrosnier.

THIS book is without any preface, but it appears to consist of a series of lectures delivered to students; and, in fact, it reads like the rough manuscript notes of a clinical lecturer much amplified and obscured, but not systematised. We find in it little that is new, and much that is questionable. Thus, few will agree that the examination of the spleen is always difficult in children; or that the 'normal three months' duration' of chorea is little, if at all, shortened by the use of any drug whatever; or, further, that senega is a depressant to be classed with antimony. One of the best chapters in the book is that on the use of alcohol in infancy, though in this country we should hardly prescribe cod-liver oil to be taken in porter. Has the author ever tasted the mixture himself? On the whole, a better work might have been expected from one with such large opportunities for observation.

NEW INVENTIONS.

Article 3531.

PREPARATIONS OF DIGESTIVE FERMENTS.

The importance of investigating thoroughly, and in a true scientific spirit, the properties of new drugs and new preparations is apparent to every one. In many cases the investigation can be carried on by physicians engaged in active practice, but in other instances the technical knowledge of the physiologist and pharmacologist is needed for a true interpretation of the facts. This co-operation is especially advantageous when dealing with such active and at the same time indefinite bodies as the vegetable and animal ferments. An extract of malt may be a powerful digestive agent, or it may have been prepared at such a temperature as to destroy the activity of the diastase. A pepsin or pancreatin may be an active medicinal substance, or it may be so largely adulterated with starch as to be practically valueless. For some time past it has been known that great improvements have been made in the mode of preparation of Kepler Extract of Malt, and that Fairchild's Scale Pepsine and Extractum Pancreatis were of such activity that nothing at all equal to them had been previously available for use in medicine. The fact that these substances were prepared by a firm so well known as Messrs. Burroughs, Wellcome, & Co., of Snow Hill Buildings, was in itself presumptive evidence that they were not altogether destitute of activity ; but still, that was not scientific evidence, and it was felt that a thorough investigation should be made, and an independent opinion given. Acting on the suggestion of several well-known physicians, the Editor of the London Medical Record appointed a Commission, consisting of Dr. Ringer, of University College Hospital, and Dr. Murrell, of the Westminster Hospital, to undertake an experimental inquiry, and report with as little delay as possible. The full text of the report has not as yet been received, but it is understood that the following statements embody the chief points on which a decision has been arrived.

1. The Kepler Diastase Extract of Malt was found to be of excellent quality. It is light in colour—showing that it has been prepared at a low temperature—and has a sweet and agreeable taste. It possesses the power of converting starch into sugar to an extent which is exceptional.

2. The Kepler Extract of Malt and Cod-Liver Oil differs but little in appearance from the simple extract of malt. Although it contains 40 per cent. of cod liver oil, the taste of the oil is hardly perceptible. On examination under the microscope it is found to be a most perfect emulsion, there being no sign or trace of oil-globules present. On holding the slide, covered with the emulsion, up to the light, it was seen to be perfectly transparent.

3. Fairchild's Extractum Pancreatis was ascertained to be a powerful digestive agent. It is alleged of it that it acts equally well in alkaline and in neutral solutions; but this point the Commission reserved for further investigation. It completely transformed the casein of milk into peptones, so that in a few minutes no curdling was produced even with nitric acid. Examined under the microscope, it was seen to be entirely free from starch.

4. Fairchild's Scale Pepsine was found to exert a speedy and effective action on fibrin. An investigation of its action on egg-albumen was reserved for a future occasion. An opinion was expressed that the new pepsine was to be regarded as an efficacious and trustworthy preparation.

5. The 'McK. & R." Capsuled Pills were examined incidentally, and the coat was found to dissolve completely in about thirty-five seconds.

6. The Wyeth Compressed Tablets of bisulphate of quinine, made without the addition of any adhesive or other substance, were found to be readily soluble in water at the temperature of the body. They were found to be uniform in size, and remarkably accurate in weight. The compressed tablets—of aconitia, atropia, morphia, &c.—for hypodermic use were found to dissolve completely, as a rule not more than from two to three minims of water being required.

The Reporters were much struck by the scientific skill and accuracy displayed in the manufacture of all the articles and preparations.

Every operation was conducted under the immediate superintendence of a scientific chemist of high attainments, and it was felt that every effort had been made to ensure the highest degree of perfection.

This report must be regarded as merely provisional, but Messrs. Burroughs, Wellcome, & Co. are to be congratulated on the favourable impression their articles have evidently made on the Commissioners.

The extensive new factory and laboratories erected by Burroughs, Wellcome, & Co. are fitted up with extremely elaborate and costly machinery, and scientific, chemical, and pharmaceutical apparatus. These appear to be on a scale quite commensurate with the business connections of this firm, whose correspondence and transactions extend into every civilised country of the world. The vacuum apparatus for preparing the Kepler Extract of Malt is the largest one ever constructed, and is of an original design—the invention of the members of the firm. By the use of this apparatus Extract of Malt is prepared at a lower temperature than is possible by any other : this is the secret of the superiority of the Kepler Extract. The condensing apparatus, percolators, mashing tubs, malt mills, air pumps, filter presses, mixing apparatus (for preparing the Kepler Emulsion of Malt and Oil) are all unique, and of improved designs.

One section of the buildings is devoted to the manufacture of the Compressed Tablets, in the process of which extremely intricate machinery is required.

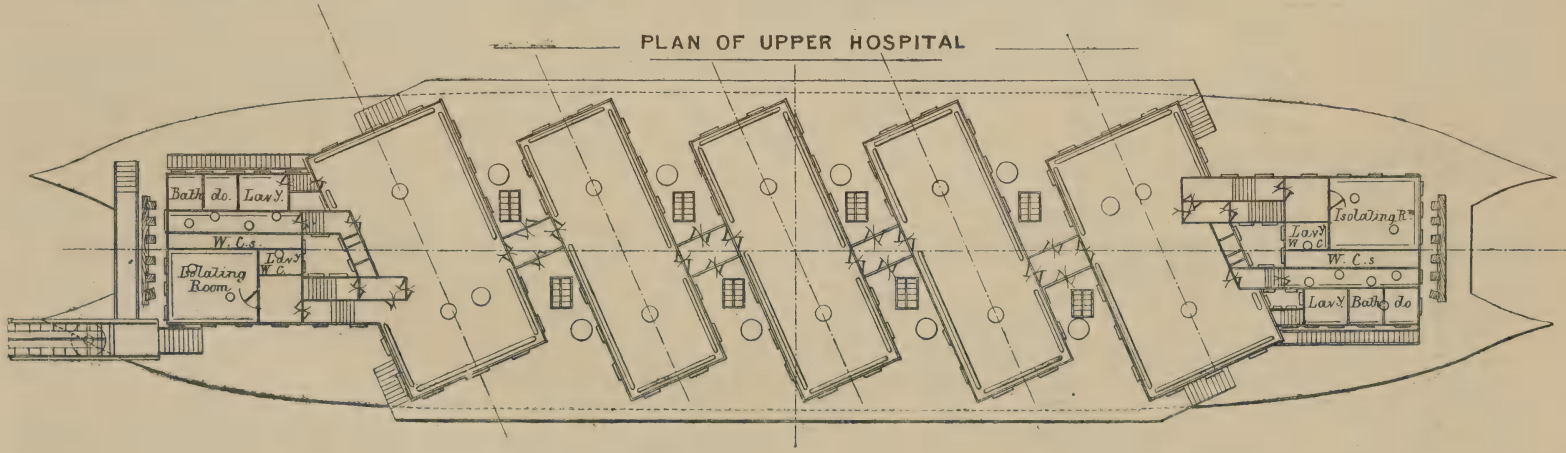
It would occupy too much space to enumerate all the complete equipments of these extensive laboratories, which bear every evidence that the proprietors keep fully up to the times in all scientific improvements pertaining to pharmaceutical manufactures. A boiler of 40 horse-power and an engine of 24 horse-power are required to operate the machinery, while the extensive manufactures necessitate the use of upwards of 50,000 gallons of water per day, and in order to secure this of great purity artesian wells have been sunk.

Messrs. Burroughs, Wellcome, & Co. are both graduates of the oldest Pharmaceutical College in the world, and their laboratories are presided over by a scientific chemist of high attainments.

The number of medical students in the University of Berlin during the present session is 1,133.

BOYLE'S SYSTEM OF VENTILATION APPLIED TO THE NEW SMALL-POX HOSPITAL SHIP 'CASTALIA.'

PLAN OF UPPER HOSPITAL



Article 3532.

THE 'CASTALIA' HOSPITAL SHIP.

One of the wisest acts of the Metropolitan Asylums Board, since its formation, was the acquirement of the *Castalia* (which was originally built on the twin principle for the prevention of sea-sickness), and the conversion of the vessel into a small-pox hospital on the Thames. The deck area being extensive it has been found practicable to construct several pavilions, and (as will be seen from the plan) to arrange them in such a way as to insure the largest amount of light for each, in addition to unimpeded ventilation. These advantages are important when it is remembered that 200 patients can be received in the *Castalia*. Knowing that in many hospitals there is inefficient ventilation, the Metropolitan Asylums Board invoked the aid of several experts on the subject, Professor de Chaumont being the principal adviser. After careful inquiry it was decided to adopt Messrs. Robert Boyle & Son's system of ventilation, as being the best and most suitable for the purpose. The Local Government Board approved of the selection, and Messrs. Boyle duly received instructions to proceed with the work.

As this is one of the largest and most important ventilating contracts that the firm has yet undertaken, and is considered to be one of the most unique examples of ventilation in this country, or indeed in the world, it is deserving of a detailed notice. For the extraction of the vitiated air there are provided twenty of the self-acting air-pump ventilators, each six feet in diameter, connected with the wards by means of iron shafts, measuring from thirty inches to four feet in diameter. There are also sixteen air-pump ventilators, three feet in diameter, connected with the water-closets, lavatories, bath-room, and other offices. Fresh air is admitted all round the wards by means of openings cut through the walls at the floor level. The air passes over hot-water pipes, which are encased in a false skirting made of iron, perforated at the top to permit of the air being equally and imperceptibly filtered in and diffused throughout the wards. The supply of air is regulated by valves or shutters worked by means of screws. This arrangement is that of Mr. Adam Miller, engineer to the Board.

Several scientific and medical men watched the progress of the work, and much interest was excited as to how it would answer. Experiments were therefore instituted by the board in order to test the efficiency of the system. The results werem ost satisfactory, indeed they are stated to have been far beyond anything that was anticipated. After an extended series of experiments to test the air-pump ventilators under atmospheric changes, such as when there was a good wind blowing, and when there was no wind at all, it was found that the ventilators extracted at the rate of 5,000,000 cubic feet of air per hour, the air in the wards being entirely changed once in every five minutes, whilst there was not the least disagreeable draught. During the whole of the tests no appearance of a down-draught was found in the ventilators. Several anemometers were placed in the shafts of the ventilators, and the readings were taken every two hours. Anemometers were also fixed outside to register the velocity of the wind. Messrs. Boyle were not present at any of these tests except the first, the engineers and experts appointed by the Asylums Board being alone intrusted with the trials. Dr. Bridges, chief inspector of hospitals, after carefully investigating the system, expressed his full approval of its action, informing Messrs. Boyle that even when he tested it in a calm he found a considerable up-draught in the shafts, and at no time any down-draught. Sir Charles Dilke, and other members of the Royal Commission on the Dwellings of the Poor, visited the *Castalia* for the purpose of examining its arrangements, and expressed themselves satisfied with all they saw. Messrs. Boyle applied their system to the *Castalia* under a guarantee, and it is evident that the Asylums Board was satisfied that all the stipulated requirements had been fulfilled, and the system a success, when it is mentioned that immediately after the conclusion of the experiments their account was paid. The system is also applied to the ambulance and transport steamers *Redcross*, *Endymion*, and *Albert Victor*.

From their practical character, the value of these experiments must be very great, as they demonstrate the true worth of Messrs. Boyle's system and its capabilities.

Article 3533.

SOUTHALL'S SANITARY TOWELS.

The sanitary towels of Messrs. Southall & Barclay, of Birmingham, meet an important want and fulfil an essential hygienic requirement; it is, therefore, matter of little surprise that their healthful advantages—which are daily becoming more known and appreciated, should have acquired for them an extensive use and popularity. These sanitary towels have been still further simplified and improved, and for accouchement and general use constitute a desideratum of the highest hygienic importance, and should entirely supersede the old-fashioned napkin to which it is so vastly superior, from its cleanliness and its securing less liability to chill in cases of delicate health, and thus diminishing the risk of disease. To ladies travelling it is indispensable. The sanitary pad, which is prepared from cotton wool rendered absorbent and antiseptic, adds to its other obvious advantages that of cheapness. These pads are sold in packets of one dozen at a shilling and two shillings per packet. Thus it will be seen that their cost is no more than that of the washing alone of the old-fashioned requisite.

DIETETIC NOVELTIES.

Article 3534.

THE WINES OF MADEIRA.

Change of taste, fashion, and the small quantities until recently imported, have caused the wines of Madeira to become almost unknown to the bulk of the present generation of wine drinkers; and it is commonly thought that unless procured from the cellar of some wealthy connoisseur, a bottle of fine old Madeira is very difficult to obtain. This state of things is no doubt due in the main to the terrible scourge that affected the vines some thirty years since. It is a matter of history that in 1852 a disease known as *Oidium* destroyed nearly all the vines in the island, which caused prices to rise to such an enormous extent as practically to prohibit the sale of Madeira wine, although at that time there was a large quantity in the hands of different mer-

chants and shippers. Mr. Blandy, a gentleman holding an important position in the island as merchant and banker, wise in his generation, bought up all the stocks of this wine that he could obtain, feeling sure that at some time it must regain its old position, and that a recovery in demand would ensue. Mr. Blandy succeeded in storing an immense quantity of old wine, and at his death, five years ago, the stock of old Madeira was valued at over 200,000*l.*, and it is on his successors, Messrs. Blandy Brothers & Co., that those who wish to renew their acquaintance with this delicious *old* wine must for some years to come depend for a supply. It is well known amongst the trade that the name of this firm is a complete guarantee for the quality of the wines they ship. The Blandy Madeiras have been exhibited at the Health Exhibition by Mr. William Gibson, of 41 Keppel Street, Gower Street, W.C., who is most vigorously re-introducing them to wine drinkers, and holds a large stock of all the 'Blandy' brands. It is now generally known that the taste for Madeira is again in the ascendant, and as the island has been favoured with a series of the finest possible vintages, extending over nearly a quarter of a century, with the care now bestowed upon the vines, a steady future production is anticipated. The wines sold by Mr. Gibson are eleven in number, and range in price from 28*s.* per dozen to a 'choice old reserve' at 84*s.* per dozen, in which is blended a proportion of wine made in the *last century*. As a fine dessert wine, and as a stimulant for invalids, No. 7 'Sercial' (very dry for Madeira), at 60*s.* per dozen, is to be recommended, while those who prefer a sweeter wine, will find one in that made from the celebrated Malmsey grape, at the same price. But there is a distinctive character with each, and except when specially ordered by a medical man, palate must decide for the choice of the buyer. The cheaper Madeiras are unquestionably better value than much of the sherry now obtainable at similar prices, and from No. 1 upwards the wines offered by Mr. Gibson all show fine quality. In cases where it is deemed necessary by the medical adviser to prescribe the habitual use of wine, a sound Madeira bearing some little age will be found one of the most wholesome of alcoholic drinks.

Article 3535.

MASON'S DIETETIC SPECIALTIES.

Mr. George Mason has recently opened a steam factory at 417 King's Road, Chelsea, for the manufacture of extracts of meat, concentrated essences, and kindred specialties, where concentrated beef-tea and essence of beef, his two principal dietetic preparations, are daily made, and meat lozenges of pleasant flavour are turned out in large quantities. The beef used for these preparations is the finest British beef, purchased daily in the Metropolitan Meat Market, and the refuse is nightly cleared away from the premises, of which the sanitary arrangements are of unexceptionable character. After the different processes of boiling, evaporating, &c., the concentrated beef-tea appears, and is, when dry, of a hard yet somewhat elastic consistency, of rich brown colour. When put up for sale it has to be melted, when it assumes the consistency of a thick treacle, and in this form is put into skins, and some idea may be formed of the nutritious value of the preparation when it is stated that a 1 lb. skin contains the constituents of 24 lbs. of beef. None but the most juicy parts of the meat are used; no coarse pieces, offal, or bone enter into the composition, which there is reason to believe is the case in some similar preparations sold, and every particle of fat is eliminated. After all the finer constituents of the meat are extracted, a second boiling takes place which results in the production of a darker glutinous substance, forming a glaze for meats, for which there is plenty of demand. The essence of beef made by this firm is a highly nutritious and agreeable food, suitable for invalids whose digestive organs are in too weak a condition to assimilate even the concentrated beef-tea. Meat lozenges have a certain value as a sustaining article of food when a solid meal is not easily to be procured, and those prepared by Mr. Mason are very palatable, a quality not always present in these lozenges. We would recommend those who use this form of portable nourishment to try this make, which are superior in flavour to any we have tasted, and are made in discs, like a gelatine lozenge. Mr. Mason's preparations have been adopted in several metropolitan hospitals, and have the solid advantages of being lower in price and proportionately larger in quantity than those made by many other manufacturers of similar kinds of concentrated foods. It is somewhat hard upon a new manufacturer that if he wishes to secure a sale for his goods, he must offer some advantage in price, even if the articles be superior to others. Mr. Mason, it will be observed, has not overlooked this trade necessity, which is having a good influence on the sale of his preparations.

Article 3536.

BINGLEY'S GINGER ALE.

In the report on the Medical and Pharmaceutical Association, recently held at Humphrey's Hall, Knightsbridge, given in the issue of the London Medical Record for Nov. 15; the exhibit of Ginger Ale, made by Mr. John Bingley, F.C.S., of Northampton, was not mentioned, for the reason that tests which were then being carried out were not ready. An analysis of the water from which this beverage is made shows it to be of excellent quality and entirely free from previous pollution. It is obtained from a deep boring in the Middle Lias. The general excellence of the Ginger Ale as a non-alcoholic drink has been established to the satisfaction of the analyst. This Ginger Ale is not a new introduction, having been before the public for some time, and has been highly commended by consumers. Mr. Bingley has an excellent qualification for the manufacture of such products, for he is an analytical chemist, and an expert of the kind is undoubtedly much more likely to produce beverages of first-class quality than persons who have had no chemical education. Bingley's Ginger Ale contains the true flavour of Jamaica ginger, the only ingredient beyond the ordinary chemicals that enters into its composition. As a stomachic as well as a refreshing drink this ginger ale has useful properties.

A new chair of Pharmacology has been established in the University of Königsberg, to which Professor Horst Meyer, of Dorpat, has been appointed. It has been formed by a division of the chair held by Professor Jaffe, who will continue to lecture on Hygiene and Medical Chemistry.

NEW PREPARATIONS.

Article 3537.

MESSRS. PARKE, DAVIS, & CO.'s PREPARATIONS.

The preparations of Messrs. Parke, Davis, & Co., of Detroit, Michigan, are so well known as hardly to call for detailed notice. Their fluid extracts have attained a reputation which it would be no exaggeration to say is world renowned. Probably one of the most generally useful is the extract of Cascara Sagrada (*Rhamnus Purshiana*), which is very popular as a remedy for habitual constipation. The dose is from ten minims to a drachm, and the effects are speedy and by no means unpleasant, there being none of that griping and straining which so often attends the use of ordinary laxatives and purgatives. For children and delicate ladies Messrs. Parke, Davis, & Co. have recently introduced a 'Cascara Cordial,' which may be described as a palatable laxative, alterative, and carminative. We know of many cases where its exhibition has been followed by a complete cure of torpidity of the bowels of long standing. Another preparation issued by this enterprising firm is dried defibrinated bullock's blood. When made into a mixture according to the directions which accompany each tin, it is taken by the most fastidious patients, either by mouth or rectum, without difficulty or hesitation. The addition of a few grains of salicylic acid as an antiseptic is perhaps, especially in warm weather, a desideratum. The empty capsules for the administration of nauseous medicines are excellent, and it is a pity they are not more commonly used. We have tried nearly all Messrs. Parke, Davis, & Co.'s preparations, and cannot speak too highly of them.

Article 3538.

VALOID OF COCA.

The subject of coca and cocaine is at the present moment attracting so much attention that the introduction of a really reliable preparation of coca will be regarded as a boon. Each minim of the new valoid corresponds to a grain of the fresh leaf of the coca plant. It is an active and a reliable preparation, and can be used with confidence. It has attained a high reputation in America in the treatment of spermatorrhœa, nervous debility, hypochondriasis, and a host of similar affections. There can be no doubt that it acts as a brain stimulant, the stimulating effect being, after a time, followed by a sedative action. We find that it is best administered in doses of from one to four drachms three times a day.

Article 3539.

WYLEY'S SUBLIMATED SERUM GAUZE.

We have received from Messrs. Wyley & Co., of Coventry, specimens of their sublimated serum gauze made from the serum of the blood of the horse. We have as yet had too limited an experience of its use to enable us to report authoritatively on the subject, but we have no doubt that it will prove useful in antiseptic surgery.

Article 3540.

THE 'McK. & R.' NITRO-GLYCERINE PILLS.

We have received from Messrs. Burroughs & Wellcome, of Snow Hill Buildings, specimens of 'McK. & R.' capsuled nitro-glycerine pills, and have submitted them for examination to Dr. Murrell, who reports that they are active, and that he has used them with success in cases of angina pectoris, megrim, neuralgia, Bright's disease, or other complaints. They are of two strengths, a fiftieth and a hundredth of a grain, and when swallowed never fail to produce the characteristic effects of the drug.

Article 3541.

MARTINDALE'S 'COCA PASTILS.'

At a time when coca and cocaine are attracting so much attention as remedial agents, we feel that we are doing good service in mentioning a pastil, recently introduced by Mr. Martindale, which contains two and a half grains of extract of coca. There can be no doubt about the activity of the preparation as the characteristic taste and smell are very apparent. What the basis may be we do not know, but it is probably a mixture of gelatin and glycerine, flavoured with orange flower water. We have no doubt that the pastils will be largely used by brain-workers and others who would not take medicine; medicine, that is, in the ordinary acceptation of the term.

MISCELLANY.

Death of the Principal of the University of Edinburgh.—Sir Alexander Grant, LL.D., &c., Principal of the University of Edinburgh, died on Dec. 1. His funeral was attended by the University senatus, assistants, and students, while the city corporation and other public bodies also took part in the procession to the Dean Cemetery, from St. Mary's Cathedral Church, where the service was held. Medicine owes much to Sir Alexander Grant, for the manner in which he originated and piloted the scheme which has given so fully equipped a medical school as is to be found in the new University buildings.

British Association in Aberdeen.—A meeting of the Interim Committee was held lately, when the committee was enlarged, and it was agreed to obtain subscriptions for a guarantee fund. It was also agreed to request the scientific societies of the North and East of Scotland to be present at the meeting of the association in September. Already a very considerable sum is promised toward the guarantee fund. The meeting of the various sections will be held in Marischal College.

Purification of Drinking Water.—The *Centralbl. für die gesam. Ther.* for May contains an account of a process for purifying drinking water, described by Prof. Almén, of Upsala. To 1 litre of water, 3 cubic centimètres of liquor ferri perchloridi are added, and, after some hours, 50 cubic centimètres of lime-water, which causes a flocculent precipitate of basic salts of iron, removing all mechanical impurities, and at the same time from 40 to 80 per cent. of the organic matters. When the water is very hard, the lime may be diminished, or even omitted altogether. Prof. Almén has employed for filtering a portable filter, composed of three linen bags, filled with sand of graduated fineness, through which the water is conducted by means of tubes. This process renders the water clear, and free from taste, but it wants the sparkling and refreshing properties which carbonic acid imparts to it.

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